The Time and Life Building in New Bond Street is the main European Headquarters of Time-Life International. It was designed by Michael Rosenauer, F.R.I.B.A.; and Sir Hugh Casson, R.D.I., M.A., F.R.I.B.A., F.S.I.A., was the co-ordinating designer for the interior. The building has an oil-fired heating system consisting of three boilers, two for central heating, one for domestic hot water, with a combined capacity of four million Btu/hr.

THE LATEST IN DESIGN—AND COMFORT

London's Time & Life Building has Oil-fired heating

A NEWLY-ESTABLISHED landmark in London is the Time and Life Building on the corner of New Bond Street and Bruton Street. This seven-storey building is the main European Headquarters of Time-Life International. The architecture, the interior decorations and the furnishings are all of the most modern design, and the building is one of the most comfortable to work in—because it has an oil-fired heating system. This quickly warms up the whole building and keeps it at any desired temperature for as long as is required.

This kind of heating system is simplicity itself to operate. There is no stoking to be done. No ash to clear out. And maintenance takes little more than a few minutes every few weeks. Also oil is a clean-burning fuel and does not contribute to London's smog.

Flexibility, ease of operation, saving of labour—these are all outstanding features of this most efficient form of space and water heating. Nor is it extravagant. When you are going to install or modify a heating system in any public building, office block or factory, school or hospital—or, even, in any largish private house—you may find it well worth your while to make provision for oil-firing. If you would like any detailed information of a technical nature, please write to Shell-Mex and B.P. Ltd., Fuel Oil Dept. 25G, Shell-Mex House, Strand, London, W.C.2. This will, of course, place you under no obligation.

LUXFER LIMITED

Reinforced Concrete Roof Lights

Specialists in the manufacture of all constructions through which daylight is admitted into a building.

LUXFER LIMITED, WAXLOW ROAD, HARLESDEN, N.W.10

Telephone: ELGAR 7292-5 *Telegrams:* LUXFER, HARLES, LONDON.

THE ARCHITECTURAL REVIEW

Volume 118 Number 708 December 1955

The Cover honours Registered Trade Mark No. 1—the red triangle of Bass—on its centenary. In Brian Spiller's article on pp. 372-381 the background to such brewers' marks of the nineteenth century is described, together with the subsequent vicissitudes of the house styles created in that period of commercial vigour. The false genteelism which has succeeded that golden age will only be extirpated from the pubs of Britain when the true nature of the Victorian pub tradition has been understood, and a new vernacular established which shall be as vigorous, bold and popular as the old.

351 **Marginalia**

352 **Letters**

354 **Frontispiece**

355 **The New Brutalism** *by Reyner Banham* As Britain's first native art-movement since the systematic study of art-history reached these islands, the New Brutalism needs to be seen in a double historical context—that of post-war architectural thought, and that of post-war historical writings on architecture. In fact, as Mr. Banham shows, these two contexts are inseparable as far as the New Brutalism is concerned, and historical considerations played a part not only in forming the Brutalists mental attitudes, but even the name by which they are known. From a generalized usage in post-war architectural polemics the term New Brutalism has narrowed its meaning, and is now generally taken to apply, properly, to the work of Alison and Peter Smithson, and Louis Kahn in architecture, and from an examination of their buildings and designs, and work of other artists with whom they have been associated, it is possible to identify the main characteristics of Brutalist architecture. These are found to be a strongly moralistic attitude to structure, in its widest sense, and materials, in their crudest sense, coupled with a desire to render every building a memorable visual image. The insistence on 'Image,' and the special meaning which this word has in Brutalist circles, is the key not only to Brutalist architecture, but also to its connections with the New Brutalism in other arts as well, and links it, in Mr. Banham's view, with a general body of anti-Academic thought, in aesthetics and in such other spheres as topology which, he suggests, replaces geometry in some New Brutalist works just as Image replaces Beauty in them.

362 **House in Yorkshire:** *Architect, Peter Womersley*

368 **House at Leicester:** *Architects, James Cubitt and Partners*

372 **Brewers' House Styles** *by Brian Spiller* The rise of the tied house—a pub operated by a brewing firm and selling only that firm's products—was the outcome of a minor industrial revolution which was also a pilot exercise for contemporary marketing techniques. By the end of the 1880's most urban pubs were owned by breweries, but the ownership was still of sufficiently recent date for the brewers to wish to set some seal of competitive proprietorship on their houses, and they contributed to the Victorian golden age of commercial design with sign-making and sign-writing, lettering, glazing and advertising techniques generally, though few brewers set out to establish an architectural house-style as well, and even nowadays the idea of any kind of trade-mark structure still seems definitely at a discount. The Brewer still establishes his style by his advertising material—but, as the illustrations to this article show, that style is apt to become gutless, coy and falsely genteel. A few noble survivals, like the Bass triangle and the Guinness harp, stand out against the drab background of a trade that seems to have lost its nerve in design almost completely. As Mr. Spiller points out, there may be good and complicated reasons —connected with finance and sales-psychology—for the preservation of a certain familiar disorder in the design of pub equipment, but these do not enforce the flabby 'good taste' which is so common —rather, they could be the pretext of a vigorous and varied vernacular.

382 **Recent Work by Luccichenti and Monaco**

388 **Horta** *by Stephan Tschudi Madsen* The problem of Art Nouveau as a working style—quite apart from its sources and origins—is largely bound up with the early works of Victor Horta, his training and the mental climate in which his undoubted genius was formed. The Academies of Ghent and Brussels, and a stay in Paris, encompassed his formal training, and were followed by entry into the office of Alphonse Balat, a classicist in a stylistic situation which also included neo-Gothic, neo-Baroque, neo-Renaissance and—most important of all—an attempt to find or invent a new national style. This attempt, incarnate in the *Société Centrale d'Architecture de Belgique*, was marked by a pioneering interest in structure and engineering—both of which were to reappear in Horta's characteristic Art Nouveau buildings. However his earliest houses were of a simplified classical aspect, which apparently dissatisfied him, and in the interval of eight years between their completion and his emergence as a fully developed architect in 1893, he is known to have studied organic form and flowers—perhaps at the instance of Viollet-le-Duc's writings, which could also have inspired the use of exposed iron construction in the building which established his matured genius, the house in the Rue de Turin. Mr. Madsen examines the stylistic qualities of this first complete manifestation of Art Nouveau in detail, and scrutinizes them for possible sources. Though British developments immediately suggest themselves, the evidence for them is not conclusive, and a better case can be made for the influence of Gauguin and his circle, through the Belgian artistic society known as *Les XX*, and of painters like Khnopff and Toorop. Horta continued to use his full Art Nouveau idiom only until a little after 1900, and from then on his work becomes simpler and less exaggerated.

Miscellany

393 **Editors Only**

394 **History**

395 **World**

396 **Wallscape**

396 **Exhibitions**

398 **Lettering**

400 **Landscape**

401 **Books**

403 **Current Architecture**

Skill: Interiors

407 **Showrooms in Hackney Road, E.2:** *Designer, Clive Latimer*

409 **Showrooms in Victoria St., S.W.1:** *Designer, Misha Black*

410 **Showrooms in New Bond St., W.1:** *Architects, Ebbe and Andresen*

411 **Design Review**

412 **Techniques: Architect/Manufacturer Co-operation III** *by Noel Moffett*

418 **The Industry** 420 **Contractors, etc.**

The Authors: *Stephan Tschudi Madsen.* Born 1923 in Norway. Educated at Oslo University (M.A. in Art History) and the Sorbonne. Curator of Oslo National Gallery 1950-2; study abroad 1952-4, lecturer at Oslo University since 1954. Articles and books in Norwegian, also a book on the sources of Art Nouveau, to appear in English early next year. *Brian Spiller:* born in Belfast 1917; read German at University College, London, served 1939-46, 1st Gurkha Rifles and Staff Intelligence; edits *A Monthly Bulletin*, a midget magazine concerned with the problems, administrative, social and aesthetic, set by pubs.

Directing Editors J. M. Richards, Nikolaus Pevsner, H. de C. Hastings

Executive Editor Hugh Casson

Art Editor Ian McCallum

Assistant Editors Gordon Cullen

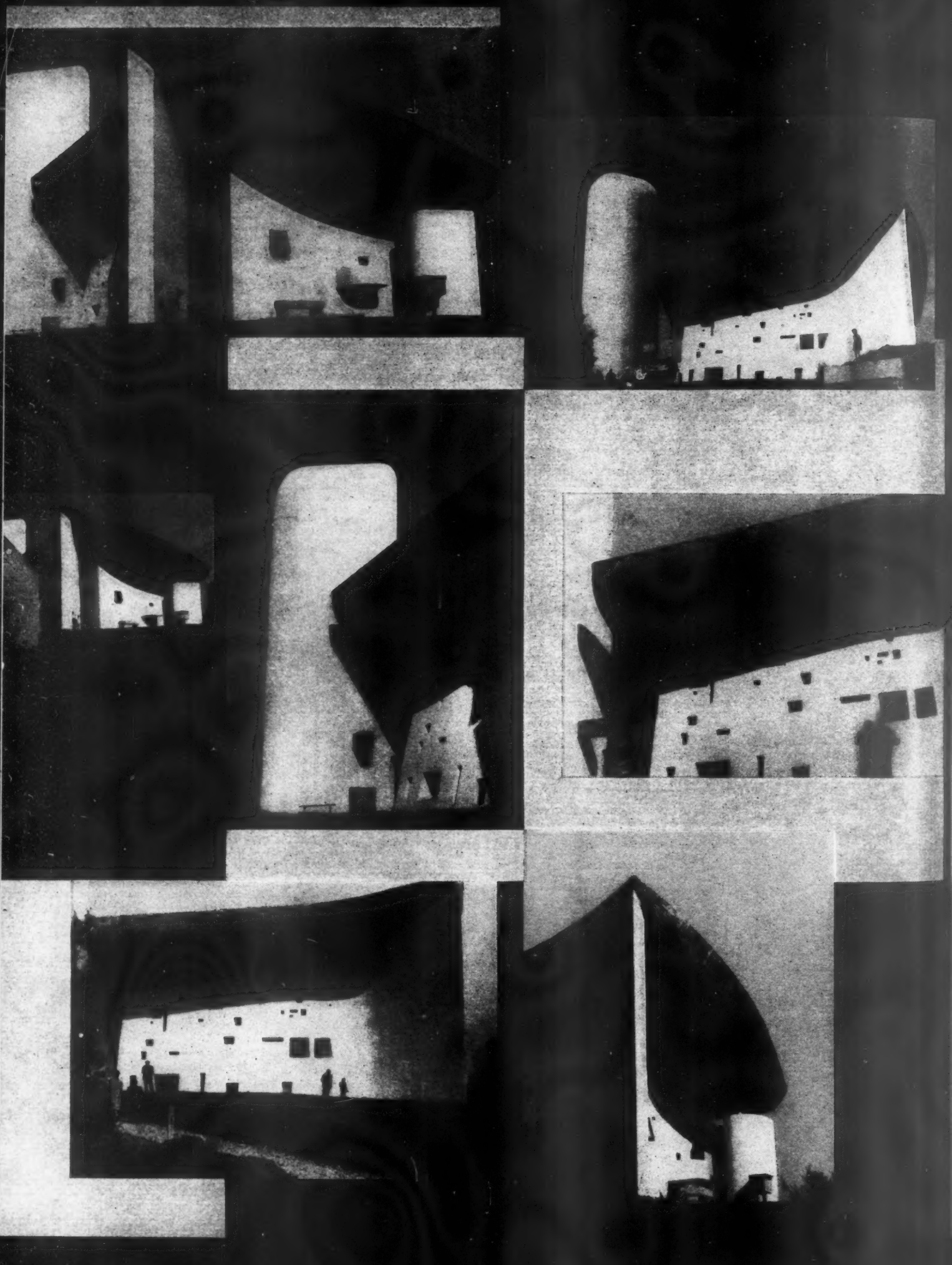
production, Ian Nairn. research, S. Lang. literary, Reyner Banham. Editorial Secretary . . Whi 0611-9

SUBSCRIPTION RATE: The annual post free subscription rate, payable in advance, is £2 18s. 0d. sterling, in U.S.A. and Canada $9. An index is issued half-yearly and is published as a supplement to the REVIEW.

THE ARCHITECTURAL REVIEW

9-13 Queen Anne's Gate, Westminster, S W 1 · Whitehall 0611

FIVE SHILLINGS



In the chapel of Notre Dame du Haut *at Ronchamp, Le Corbusier is generally felt to have achieved one of the most personal and surprising buildings of his career. In the first flurry of excitement at its unexpected forms, consternation has been expressed at the way a master of logical structure has set his great curving roof apparently afloat above the apexes of the massive and perforated walls—the narrow glazed gap between roof and walls can be seen in the exterior views opposite* *. Maturer consideration will be able to evaluate how far the success of the plastic effect justifies such anti-structural usages and, as a step toward such evaluation, James Stirling will contribute an appreciation of* Notre Dame du Haut *in the new year.*

Reyner Banham

THE NEW BRUTALISM

'L'Architecture, c'est, avec des matières bruts, établir des rapports émouvants.' Le Corbusier: *Vers une Architecture.*

Introduce an observer into any field of forces, influences or communications and that field becomes distorted. It is common opinion that *Das Kapital* has played old harry with capitalism, so that Marxists can hardly recognize it when they see it, and the widespread diffusion of Freud's ideas has wrought such havoc with clinical psychology that any intelligent patient can make a nervous wreck of his analyst. What has been the influence of contemporary architectural historians on the history of contemporary architecture?

They have created the idea of a Modern Movement—this was known even before Basil Taylor took up arms against false historicism—and beyond that they have offered a rough classification of the 'isms' which are the thumb-print of Modernity into two main types: One, like *Cubism*, is a label, a recognition tag, applied by critics and historians to a body of work which appears to have certain consistent principles running through it, whatever the relationship of the artists; the other, like *Futurism*, is a banner, a slogan, a policy consciously adopted by a group of artists, whatever the apparent similarity or dissimilarity of their products. And it is entirely characteristic of the New Brutalism—our first native art-movement since the New Art-History arrived here—that it should confound these categories and belong to both at once.

Is Art-History to blame for this? Not in any obvious way, but in practically every other way. One cannot begin to study the New Brutalism without realizing how deeply the New Art-History has bitten into progressive English architectural thought, into teaching methods, into the common language of communication between architects and between architectural critics. What is interesting about R. Furneaux Jordan's parthian

footnote on the New Brutalism—'. . . Lubetkin talks across time to the great masters, the Smithsons talk only to each other'—is not the fact that it is nearly true, and thus ruins his argument, but that its terms of valuation are historical. The New Brutalism has to be seen against the background of the recent history of history, and, in particular, the growing sense of the inner history of the Modern Movement itself.

The history of the phrase itself is revealing. Its form is clearly derived from THE ARCHITECTURAL REVIEW's post-war *trouvaille* 'The New Empiricism,' a term which was intended to describe visible tendencies in Scandinavian architecture to diverge from another historical concept 'The International Style.' This usage, like any involving the word *new*, opens up an historical perspective. It postulates that an old empiricism can be identified by the historian, and that the new one can be distinguished from it by methods of historical comparison, which will also distinguish it from a mere 'Empirical Revival.' The ability to deal with such fine shades of historical meaning is in itself a measure of our handiness with the historical method today, and the use of phrases of the form 'The New X-ism'—where X equals any adjectival root—became commonplace in the early nineteen-fifties in fourth-year studios and other places where architecture is discussed, rather than practised.

The passion of such discussion has been greatly enhanced by the clarity of its polarization—Communists versus the Rest—and it was somewhere in this vigorous polemic that the term 'The New Brutalism' was first coined.[1] It was, in the beginning, a term of Communist abuse, and it was intended to signify the normal vocabulary of Modern Architecture—flat roofs, glass, exposed structure—considered as morally reprehensible deviations from 'The New Humanism,' a phrase which means something different in Marxist hands to the meaning which might be expected. The New Humanism meant, in architecture at that time, brickwork, segmental arches, pitched roofs, small windows (or small panes at any rate)—picturesque detailing without picturesque planning. It was, in fact, the so-called 'William Morris Revival,' now happily defunct, since Kruschev's reversal of the Party's architectural line, though this reversal has, of course, taken the guts out of subsequent polemics. But it will be observed that The New Humanism was again a quasi-historical concept, oriented, however spuriously, toward that mid-nineteenth century epoch which was Marxism's Golden Age, when you could recognize a capitalist when you met him.

However, London architectural circles are a small field in which to conduct a polemic of any kind, and abuse must be directed at specific persons, rather than classes of persons, since there was rarely enough unanimity (except among Marxists) to allow a class to coalesce. The New Brutalists at whom Marxist spite was directed could be named and recognized—and so could their friends in other arts. The term had no sooner got into public circulation than its meaning began to narrow. Among the non-Marxist grouping there was no particular unity of programme or intention, but there was a certain community of interests, a tendency to look toward Le Corbusier, and to be aware of something called *le beton brut*, to know the quotation which appears at the head of this article and, in the case of the more sophisticated and aesthetically literate, to know of the *Art Brut* of Jean Dubuffet and his connection in Paris. Words and ideas, personalities and discontents chimed together and in a matter of weeks—long before the Third Programme and the monthlies had got hold of the phrase—it had been appropriated as their own, by their own desire and public consent, by two young architects, Alison and Peter Smithson.

The phrase had thus changed both its meaning and its usage. Adopted as something between a slogan and a brick-bat flung in the public's face, The New Brutalism ceased to be a label descriptive of a tendency common to most modern architecture, and became instead a programme, a banner, while retaining some—rather restricted—sense as a descriptive label. It is because it is both kinds of -ism at once that The New Brutalism eludes precise description, while remaining a living force in contemporary British architecture.

As a descriptive label it has two overlapping, but not identical, senses. Non-architecturally it describes the art of Dubuffet, some aspects of Jackson Pollock and of Appel, and the burlap paintings of Alberto Burri—among foreign artists—and, say, Magda Cordell or Edouardo Paolozzi and Nigel Henderson among English artists. With these last two, the Smithsons collected and hung the I.C.A. exhibition *Parallel of Life and Art*, which, though it probably preceded the coining of the phrase, is nevertheless regarded as a *locus classicus* of the movement. The more instructive aspects of this exhibition will be considered later: for the moment let us observe that many critics (and students at the Architectural Association) complained of the deliberate flouting of the traditional concepts of photographic beauty, of a cult of ugliness, and 'denying the spiritual in Man.' The tone of response to The New Brutalism existed even before hostile critics knew what to call it, and there was an awareness that the Smithsons were headed in a different direction to most other younger architects in London.

Alison Smithson first claimed the words in public as her own in a description of a project for a small house in Soho (*Architectural Design*, November, 1953) designed before the phrase existed, and previously tagged 'The warehouse aesthetic'—a very fair descrip-

[1] There is a persistent belief that the word *Brutalism* (or something like it) had appeared in the English Summaries in an issue of *Bygg-Mastaren* published late in 1950. The reference cannot now be traced, and the story must be relegated to that limbo of Modern Movement demonology where Swedes, Communists and the Town and Country Planning Association are bracketed together as different isotopes of the common 'Adversary.'

tion of what The New Brutalism stood for in its first phase. Of this house, she wrote: '. . . had this been built, it would have been the first exponent of the New Brutalism in England, as the preamble to the specification shows: "It is our intention in this building to have the structure exposed entirely, without interior finishes wherever practicable. The contractor should aim at a high standard of basic construction, as in a small warehouse".' The publication of this project led to an extensive and often hilarious correspondence in various periodicals through the summer of 1954, a correspondence which wandered further and further from its original point because most writers were in fact discussing either the exhibition *Parallel of Life and Art*, or the (as yet) unpublished school at Hunstanton. When this was finally published (AR, September, 1954) the discussion took a sharper and less humorous tone, for here in three-dimensional and photographic reality, and in the classic Modern Movement materials of concrete, steel and glass, was the Smithsons' only completed building. The phrase The New Brutalism was immediately applied to it, though it had been designed in the spring of 1950, long before even the house in Soho, but the Brutalists themselves have accepted this appellation, and it has become the tag for Hunstanton wherever the building has been discussed.

Hunstanton, and the house in Soho, can serve as the points of architectural reference by which The New Brutalism in architecture may be defined. What are the visible and identifiable characteristics of these two structures? Both have formal, axial plans—Hunstanton, in fact, has something like true bi-axial symmetry, and the small Gymnasium block alongside the school is a kind of exemplar in little of just how formal the complete scheme was to have been—and this formality is immediately legible from without. Both exhibit their basic structure, and both make a point of exhibiting their materials—in fact, this emphasis on basic structure is so obsessive that many superficial critics have taken this to be the whole of New Brutalist Architecture. Admittedly, this emphasis on basic structure is important, even if it is not the whole story, and what has caused Hunstanton to lodge in the public's gullet is the fact that it is almost unique among modern buildings in being made of what it appears to be made of. Whatever has been said about honest use of materials, most modern buildings *appear* to be made of whitewash or patent glazing, even when they are made of concrete or steel. Hunstanton *appears* to be made of glass, brick, steel and concrete, and is in fact made of glass, brick, steel and concrete. Water and electricity do not come out of unexplained holes in the wall, but are delivered to the point of use by visible pipes and manifest conduits. One can see what Hunstanton is made of, and how it works, and there is not another thing to see except the play of spaces.

This ruthless adherence to one of the basic moral imperatives of the Modern Movement—honesty in structure and material—has precipitated a situation to which only the pen of Ibsen could do justice. The mass of moderate architects, *hommes moyens sensuels*, have found their accepted practices for waiving the requirements of the conscience-code suddenly called in question; they have been put rudely on the spot, and they have not liked the experience. Of course, it is not just the building itself which has precipitated this situation, it is the things the Brutalists have said and done as well, but, as with the infected Spa in *An Enemy of the People*, the play of personalities focuses around a physical object.

The qualities of that object may be summarized as follows: 1, Formal legibility of plan; 2, clear exhibition of structure, and 3, valuation of materials for their inherent qualities 'as found.' This summary can be used to answer the question: Are there other New Brutalist buildings besides Hunstanton? It is interesting to note that such a summary of qualities could be made to describe Marseilles, Promontory and Lakeshore apartments, General Motors Technical Centre, much recent Dutch work and several projects by younger English architects affiliated to CIAM. But, with the possible exception of Marseilles, the Brutalists would probably reject most of these buildings from the canon, and so must we, for all of these structures exhibit an excess of *suaviter in modo*, even if there is plenty of *fortiter in re* about them. In the last resort what characterizes the New Brutalism in architecture as in painting is precisely its brutality, its *je-m'en-foutisme*, its bloody-mindedness. Only one other building conspicuously carries these qualities in the way that Hunstanton does, and that is Louis Kahn's Yale Art Centre. Here is a building which is uncompromisingly frank about its materials, which is inconceivable apart from its boldly exhibited structural method which—being a concrete space-frame—is as revolutionary and unconventional as the use of the Plastic Theory in stressing Hunstanton's steel H-frames. Furthermore, the plan is very formal in the disposition of its main elements, and makes a kind of symmetry about two clearly defined axes at right angles to one another. And this is a building which some Brutalists can apparently accept as a constituent New Brutalist structure.

But, with all due diffidence, the present author submits that it still does not quite answer to the standard set by Hunstanton. For one thing, the Smithsons' work is characterized by an abstemious under-designing of the details, and much of the impact of the building comes from the ineloquence, but absolute consistency, of such components as the stairs and handrails. By comparison, Kahn's detailing is arty, and the stair-rail and balustrading (if that is the word for stainless netting) is jarringly out of key with the rough-shuttered concrete of the main structure. This may be 'only a matter of detailing' but there is another short-fall about Yale Art Centre which could not be brushed off so easily. Every Smithson design has been, obviously or subtly, a coherent and apprehensible visual entity, but this Louis Kahn's design narrowly fails to be. The internal spaces will be cluttered with display screens which, in the nature of his programme and his solution of it, must be susceptible of being moved, so that formal clarity is always threatened. But beyond this the relation of interior to exterior fails to validate the axes which govern the plan. Available viewpoints, the placing of the entrances, the handling of the exterior

walls—all tend to lose or play down the presence of planning axes. No doubt there are excellent functional reasons for the doors being where they are, and excellent structural reasons for the walls being treated in the way they are—but if these reasons were so compelling, why bother with an axial plan anyhow?

This is a hard thing to have to say about a seriously considered building by a reputable architect of some standing, but contact with Brutalist architecture tends to drive one to hard judgements, and the one thing of which the Smithsons have never been accused is a lack of logic or consistency in thinking through a design. In fact it is the ruthless logic more than anything else which most hostile critics find distressing about Hunstanton—or perhaps it is the fact that this logic is worn on the sleeve. One of the reasons for this obtrusive logic is that it contributes to the apprehensibility and coherence of the building as a visual entity, because it contributes to the building as 'an image.'

An Image—with the utterance of these two words we bridge the gap between the possible use of The New Brutalism as a descriptive label covering, in varying degrees of accuracy, two or more buildings, and The New Brutalism as a slogan, and we also go some way to bridge the gap between the meaning of the term as applied to architecture and its meaning as applied to painting and sculpture. The word *image* in this sense is one of the most intractable and the most useful terms in contemporary aesthetics, and some attempt to explain it must be made.

A great many things have been called 'an image'—S. M. della Consolazione at Todi, a painting by Jackson Pollock, the Lever Building, the 1954 Cadillac convertible, the roofscape of the *Unité* at Marseilles, any of the hundred photographs in *Parallel of Life and Art*. 'Image' seems to be a word that describes anything or nothing. Ultimately, however, it means something which is visually valuable, but not necessarily by the standards of classical aesthetics. Where Thomas Aquinas supposed beauty to be *quod visum placet* (that which seen, pleases),[2] image may be defined as *quod visum perturbat*—that which seen, affects the emotions, a situation which could subsume the pleasure caused by beauty, but is not normally taken to do so, for the New Brutalists' interests in image are commonly regarded, by many of themselves as well as their critics, as being anti-art, or at any rate anti-beauty in the classical aesthetic sense of the word. But what is equally as important as the specific kind of response, is the nature of its cause. What pleased St. Thomas was an abstract quality, beauty—what moves a New Brutalist is the thing itself, in its totality, and with all its overtones of human association. These ideas of course lie close to the general body of anti-Academic aesthetics currently in circulation, though they are not to be identified exactly with Michel Tapié's concept of *un Art Autre*,[3] even though that concept covers many Continental Brutalists as well as Edouardo Paolozzi.

Nevertheless this concept of *Image* is common to all aspects of The New Brutalism in England, but the manner in which it works out in architectural practice has some surprising twists to it. Basically, it requires that the building should be an immediately apprehensible visual entity, and that the form grasped by the eye should be confirmed by experience of the building in use. Further, that this form should be entirely proper to the functions and materials of the building, in their entirety. Such a relationship between structure, function and form is the basic commonplace of all good building of course, the demand that this form should be apprehensible and memorable is the apical uncommonplace which makes good building into great architecture. The fact that this form-giving obligation has been so far forgotten that a great deal of good building can be spoken of as if it were architecture, is a mark of a seriously decayed condition in English architectural standards. It has become too easy to get away with the assumption that if structure and function are served then the result must be architecture—so easy that the meaningless phrase 'the conceptual building' has been coined to defend the substandard architectural practices of the routine-functionalists, as if 'conceptual buildings' were something new, and something faintly reprehensible in modern architecture.

All great architecture has been 'conceptual,' has been image-making—and the idea that any great buildings, such as the Gothic Cathedrals, grew unconsciously through anonymous collaborative attention to structure and function is one of the most insidious myths with which the Modern Movement is saddled. Every great building of the Modern Movement has been a conceptual design, especially those like the Bauhaus, which go out of their way to look as if they were the products of 'pure' functionalism, whose aformal compositions are commonly advanced by routine-functionalists in defence of their own abdication of architectural responsibility. But a conceptual building is as likely to be aformal as it is to be formal, as a study of the Smithsons' post-Hunstanton projects will show.

Hunstanton's formality is unmistakably Miesian, as Philip Johnson pointed out, possibly because IIT was one of the few recent examples of conceptual, form-giving design to which a young architect could turn at the time of its conception, and the formality of their Coventry Cathedral competition entry is equally marked, but here one can safely posit the interference of historical studies again, for, though the exact priority of date as between the Smithsons' design and the publication of Professor Wittkower's *Architectural Principles of the Age of Humanism* is disputed (by the Smithsons) it cannot be denied that they were in touch with Wittkowerian studies at the time, and were as excited by them as anybody else.

The general impact of Professor Wittkower's book on a whole generation of post-war architectural students is one of the phenomena of our time. Its exposition of a body of architectural theory in which function and form were significantly linked by the objective laws governing the Cosmos (as Alberti and Palladio understood them) suddenly offered a

[continued on page 361

[2] Paraphrasing *Summa Theologica* II (i) xxvii, I. The passage is normally rendered into English as '. . . but that whose very apprehension pleases is called beautiful.'

[3] *See* his book of the same name, published in 1952. A closely analogous development is that of *musique concrète*, which uses 'real sounds,' manipulated in a manner which resembles the manipulation of some of the photographs in *Parallel*, and does not concern itself with harmony or melody in any recognizable way.

pollock

Painting, 1953—a-formal composition in action.

henderson

Sgraffiti on a Window (photograph)—image of human as well as formal value.

Parallel of Life and Art—exhibition of 100 Brutalist images.

burri

NEW BRUTALISM

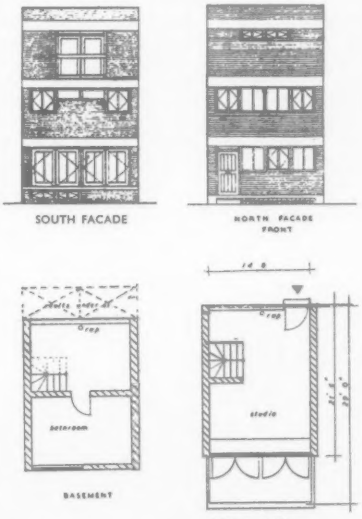
Painting on burlap—typically Brutalist in his attitude to materials, Burri accords the burlap the same visual value as the paint it carries.

cordell

Figure, 1955—'anti-aesthetic' human image.

paolozzi

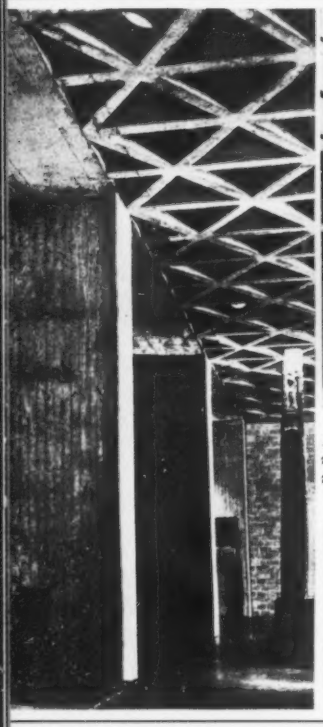
*Head, 1953—**'sophisticated primitivism.'***

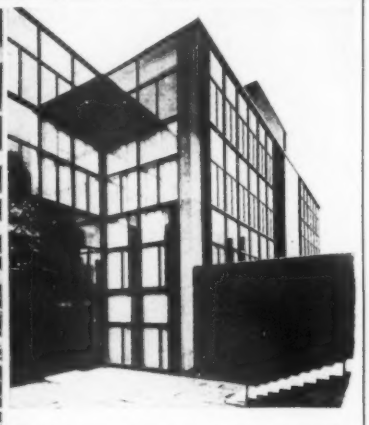


The first building to be categorized as Brutalist, this project for a house in Soho (A. & P. Smithson) exhibits not only the emphasis on materials and structure, but also the compositional formality of early Brutalism.

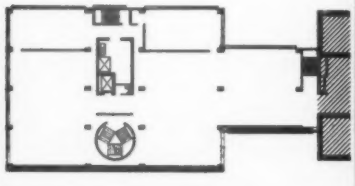
School at Hunstanton (A. & P. Smithson), first completed New Brutalist building, view toward gymnasium.

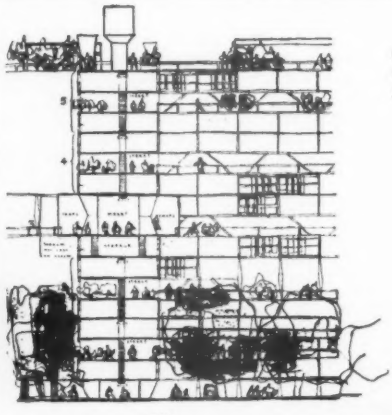
Coventry Cathedral competition entry (A. & P. Smithson) dramatic visual image created by spectacular structure, raised on a plan of Neo-Palladian symmetry—their last formal plan, 1951.



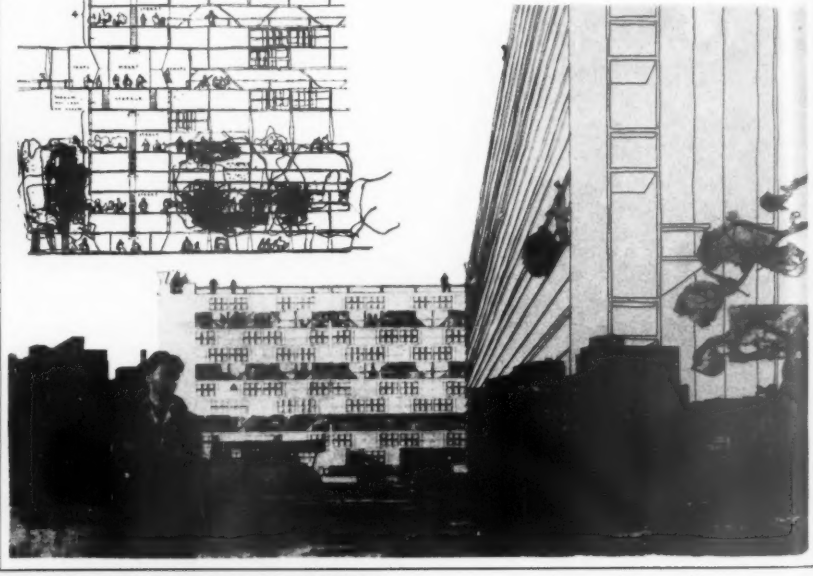


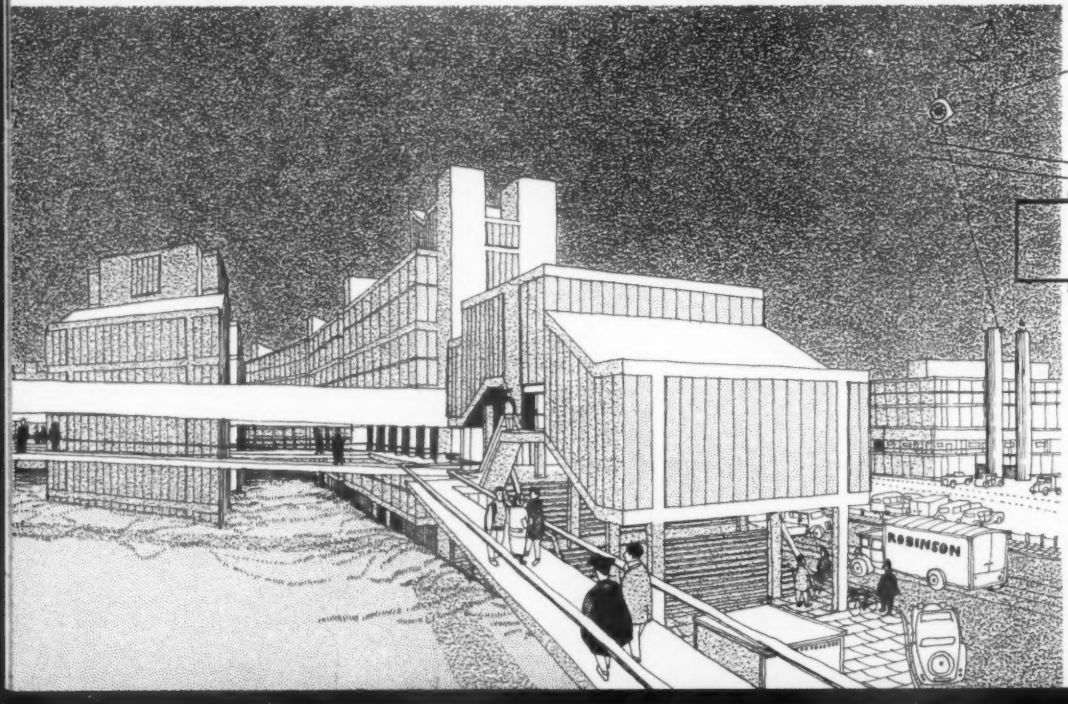
Yale Art Centre (architects: Kahn and Orr)—formality, expressed structure, exposed materials; the most truly Brutalist building in the New World.

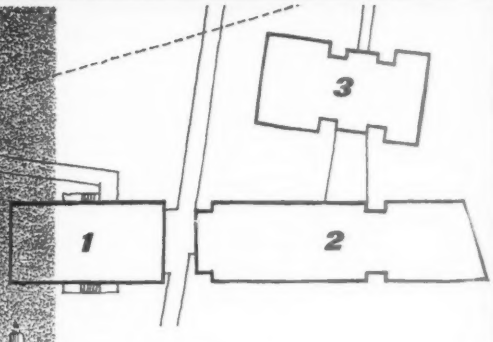




Golden Lane re-development project, shows Smithsons turning against geometry and formality, placing increased visual emphasis on site, circulation, habitation and human presence.







Sheffield University extensions (competition entry by A. & P. Smithson)—furthest development of New Brutalist architecture toward the completely a-formal, anti-geometric, yet systematic compositional methods exemplified in painting by Pollock and Burri. Raised walk-ways, one suspended beneath a box-duct for services, connect the main entrance, under 1, with the Arts dept., 3, Senate House, 2, and other buildings on site.

continued from page 358]

way out of the doldrum of routine-functionalist abdications, and neo-Palladianism became the order of the day. The effect of *Architectural Principles* has made it by far the most important contribution—for evil as well as good—by any historian to English Architecture since *Pioneers of the Modern Movement*, and it precipitated a nice disputation on the proper uses of history. The question became: Humanist principles to be followed? or Humanist principles as an example of the kind of principles to look for? Many students opted for the former alternative, and Routine-Palladians soon became as thick on the ground as Routine-Functionalists. The Brutalists, observing the inherent risk of a return to pure academicism—more pronounced at Liverpool than at the AA—sheered off abruptly in the other direction and were soon involved in the organization of *Parallel of Life and Art*.

Introducing this exhibition to an AA student debate Peter Smithson declared: 'We are not going to talk about proportion and symmetry' and this was his declaration of war on the inherent academicism of the neo-Palladians, and the anti-Brutalist section of the house made it clear how justified was this suspicion of crypto-academicism by taking their stand not only on Palladio and Alberti but also on Plato and the Absolute. The new direction in Brutalist architectural invention showed at once in the Smithsons' Golden Lane and Sheffield University competition entries. The former, only remembered for having put the idea of the street-deck back in circulation in England, is notable for its determination to create a coherent visual image by non-formal means, emphasizing visible circulation, identifiable units of habitation, and fully validating the presence of human beings as part of the total image—the perspectives had photographs of people pasted on to the drawings, so that the human presence almost overwhelmed the architecture.

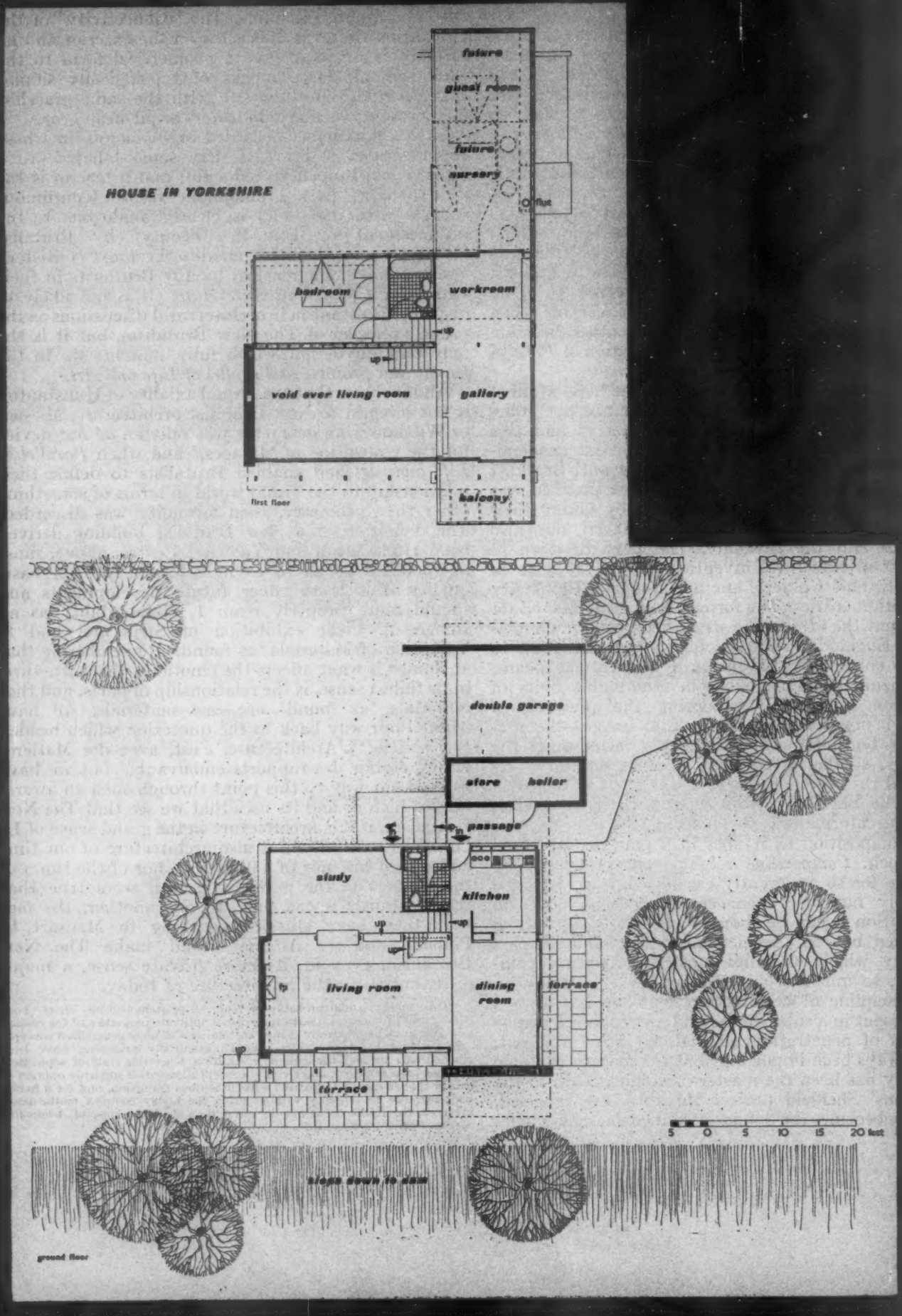
But the Sheffield design went further even than this—and aformalism becomes as positive a force in its composition as it does in a painting by Burri or Pollock. *Composition* might seem pretty strong language for so apparently casual a layout, but this is clearly not an 'unconceptual' design, and on examination it can be shown to have a composition, but based not on the elementary rule-and-compass geometry which underlies most architectural composition, so much as an intuitive sense of topology. As a discipline of architecture topology has always been present in a subordinate and unrecognized way—qualities of penetration, circulation, inside and out, have always been important, but elementary Platonic geometry has been the master discipline. Now, in the Smithsons' Sheffield project the roles are reversed, topology becomes the dominant and geometry becomes the subordinate discipline. The 'connectivity' of the circulation routes is flourished on the exterior and no attempt is made to give a geometrical form to the total scheme; large blocks of topologically similar spaces stand about the site with the same graceless memorability as martello towers or pit-head gear.

Such a dominance accorded to topology—in whose classifications a brick is the same 'shape' as a billiard ball (unpenetrated solid) and a teacup is the same 'shape' as a gramophone record (continuous surface with one hole) is clearly analogous to the displacement of Tomistic 'beauty' by Brutalist 'Image,'[4] and Sheffield remains the most consistent and extreme point reached by any Brutalists in their search for *Une Architecture Autre*. It is not likely to displace Hunstanton in architectural discussions as the prime exemplar of The New Brutalism, but it is the only building-design which fully matches up to the threat and promise of *Parallel of Life and Art*.

And it shows that the formal axiality of Hunstanton is not integral to New Brutalist architecture. Miesian or Wittkowerian geometry was only an *ad hoc* device for the realization of 'Images,' and when *Parallel of Life and Art* had enabled Brutalists to define their relationship to the visual world in terms of something other than geometry, then formality was discarded. The definition of a New Brutalist building derived from Hunstanton and Yale Art Centre, above, must be modified so as to exclude formality as a basic quality if it is to cover future developments and should more properly read: 1, Memorability as an Image; 2, Clear exhibition of Structure; and 3, Valuation of Materials 'as found.' Remembering that an Image is what affects the emotions, that structure, in its fullest sense, is the relationship of parts, and that materials 'as found' are raw materials, we have worked our way back to the quotation which headed this article 'L'Architecture, c'est, avec des Matières Bruts, établir des rapports émouvants,' but we have worked our way to this point through such an awareness of history and its uses that we see that The New Brutalism, if it is architecture in the grand sense of Le Corbusier's definition, is also architecture of our time and not of his, nor of Lubetkin's, nor of the times of the Masters of the past. Even if it were true that the Brutalists speak only to one another, the fact that they have stopped speaking to Mansart, to Palladio and to Alberti would make The New Brutalism, even in its more private sense, a major contribution to the architecture of today.

[4] This analogy could probably be rendered epistemologically strict—both beauty and geometry, hitherto regarded as ultimate properties of the *cosmos*, now appear as linguistically refined special cases of more generalized concepts—image and topology—which, though essentially primitive, have been reached only through immense sophistication. Once this state of sophistication has been achieved, and the new concept digested, it suddenly appears so simple that it can be vulgarized without serious distortion, and for a handy back-entrance to topology without using the highly complex mathematics involved, the reader could not do better than acquire a copy of *Astounding Science Fiction* for July, 1954.

HOUSE IN YORKSHIRE



HOUSE IN YORKSHIRE

ARCHITECT | **PETER WOMERSLEY**

1, The view south from the living room over the Holme valley.

The house is near Farnley Tyas, about four miles south of Huddersfield, at the edge of a 200-foot drop into a thickly wooded valley. There are extensive views all round of woods and moorland. The site is 100 yards long, but only 24 yards across at its widest, and has many fully grown sycamores, beeches and chestnut trees, which were all preserved. The house was sited as near as possible to the edge of the drop to leave the maximum space between it and the road.

Most of the internal space is devoted to a large living room, with one enclosed bedroom and a service stack, but a nursery and guest room are to be built later over

2

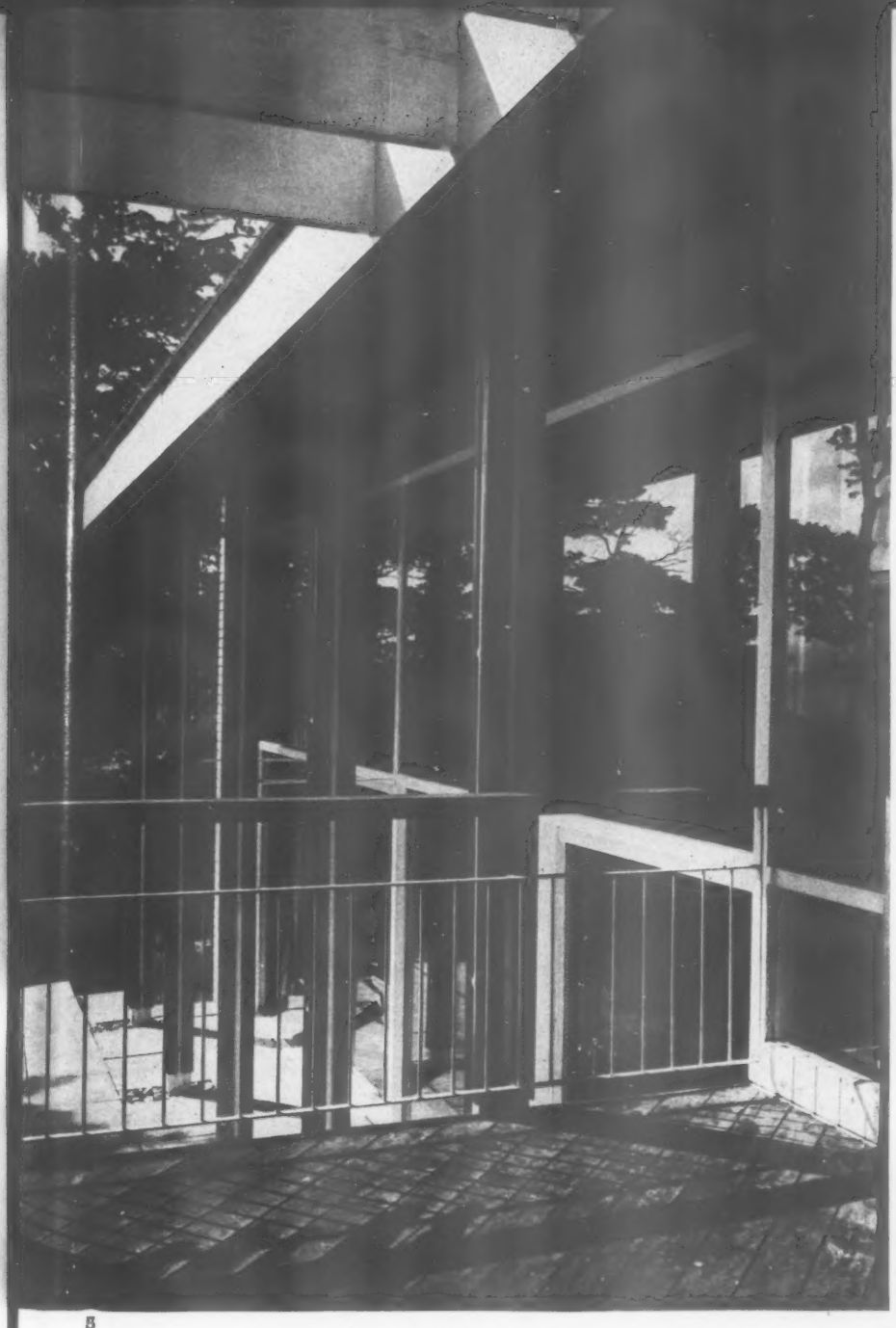
2, the east side, showing garage with terrace above, and 3, a detail of the dining end of this side with music gallery on the first floor. 4 living room and balcony from the south-west.

the garage, within the existing timber framework. The living room is differentiated into six main sub-divisions by changes in floor and ceiling level, and by visual hazards—the service core, staircase, sideboard and radiogram units, and the structural columns. Apart from providing all the normal facilities of a home, provision had to be made for extensive entertaining and music. The whole internal area can be opened up for large parties, or the different parts of it used separately and isolated for smaller gatherings, largely by changes in artificial lighting.

Accommodation had to be made for both live and recorded music. A music gallery was designed for the playing of the former, and the apparatus for recorded music is housed between the columns separating living room and study. The quality of sound produced is helped by the height of the room with its ceiling panelled in

3

4



5

5, the timber columns supporting the roof in front of the living room curtain wall, seen from the balcony. 6, the first-floor terrace (which is a future children's wing) from the west with the main block of the house on the right; study below and master bedroom above.

mahogany by the area of stone paving immediately below the amplifier unit, and by possible alterations in the texture of the wall opposite to the speaker—plate glass or curtain in varying degrees. The living room dominates the house with its size and height and smaller, more intimate spaces open off it—the workroom upstairs for dressmaking, etc., the study, and the kitchen, its cooker fitted with hood and extract fan to eliminate all smell.

The structure is framed in timber, with infilling materials which echo the surrounding natural colours. Foundations are traditional 13½ in. brickwork on concrete footings. The ground floor is 4-in. concrete on hardcore

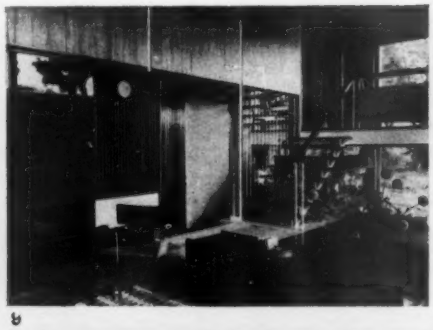
6

with a continuous damp-proof membrane. On top of this is a 3 in. screed containing the steel heating coils. The roof is supported on timber columns at 6 ft. centres, with two spans, of 18 ft. and 12 ft. The columns are strapped to cast-iron shoes bolted to the site concrete. The intermediate floors are 1-in. diagonal softwood boarding on softwood joists, which rest on 2 in. by 2 in. mild steel angles fixed to the trimming joists. The roof consists of 1-in. diagonal boarding on tilting fillets, on a slag wool quilt ; this is draped over 10 in. by 3 in. softwood joists tusk tenoned to the trimming joists. The garage and boiler-house roof is formed of patent precast r.c. beams, with breeze spacers.

Bracing walls are either diagonally braced stud walls, lined externally with softwood horizontal boarding and with exterior finish of oiled and varnished 4 in. by 1 in. meranti shiplap, or mass walls of limestone, the different floor levels raised on rubble limestone salvaged from a local railway siding. A pale lilac-coloured sand-lime brick was used for the chimney wall and the garage and boiler-house. Fixed windows have double glazing units ; sliding windows are ¼-in. plate in painted hardwood frames. The ground floor covering is mostly 1-in. York stone squared flags bedded in a cement screed. The living room has a camphorwood strip floor on battens. The walls around the service core are 3-in. breeze either plastered and painted, or covered with polished mahogany boarding. All stone and brick walls are left unplastered. Ceilings throughout are formed of decorative plywood panels with a birch or gaboon finish. Furniture is designed by the architect.

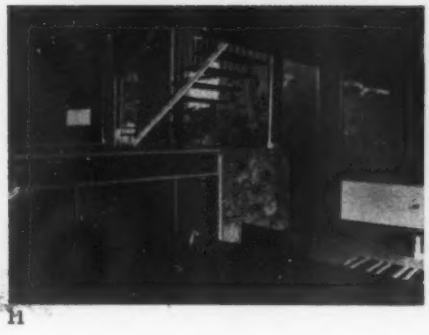
7

8



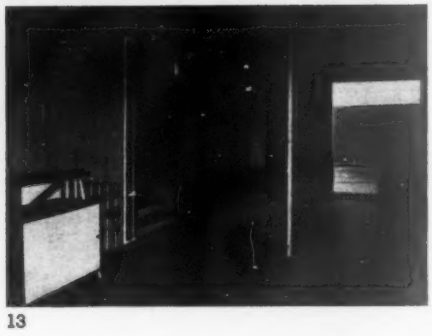
9

10



11

12



13

7 and 8, looking down into the living room from the music gallery. 9, stairs and gallery from the living room. 10, master bedroom looking westward over Hay Wood. 11, dining room, with music gallery over. 12, study. 13, workroom on the first floor. 14, on the facing page, looking across the living room from the study. 15, the kitchen seen through the servery hatch from the dining room.

14
15

HOUSE AT LEICESTER

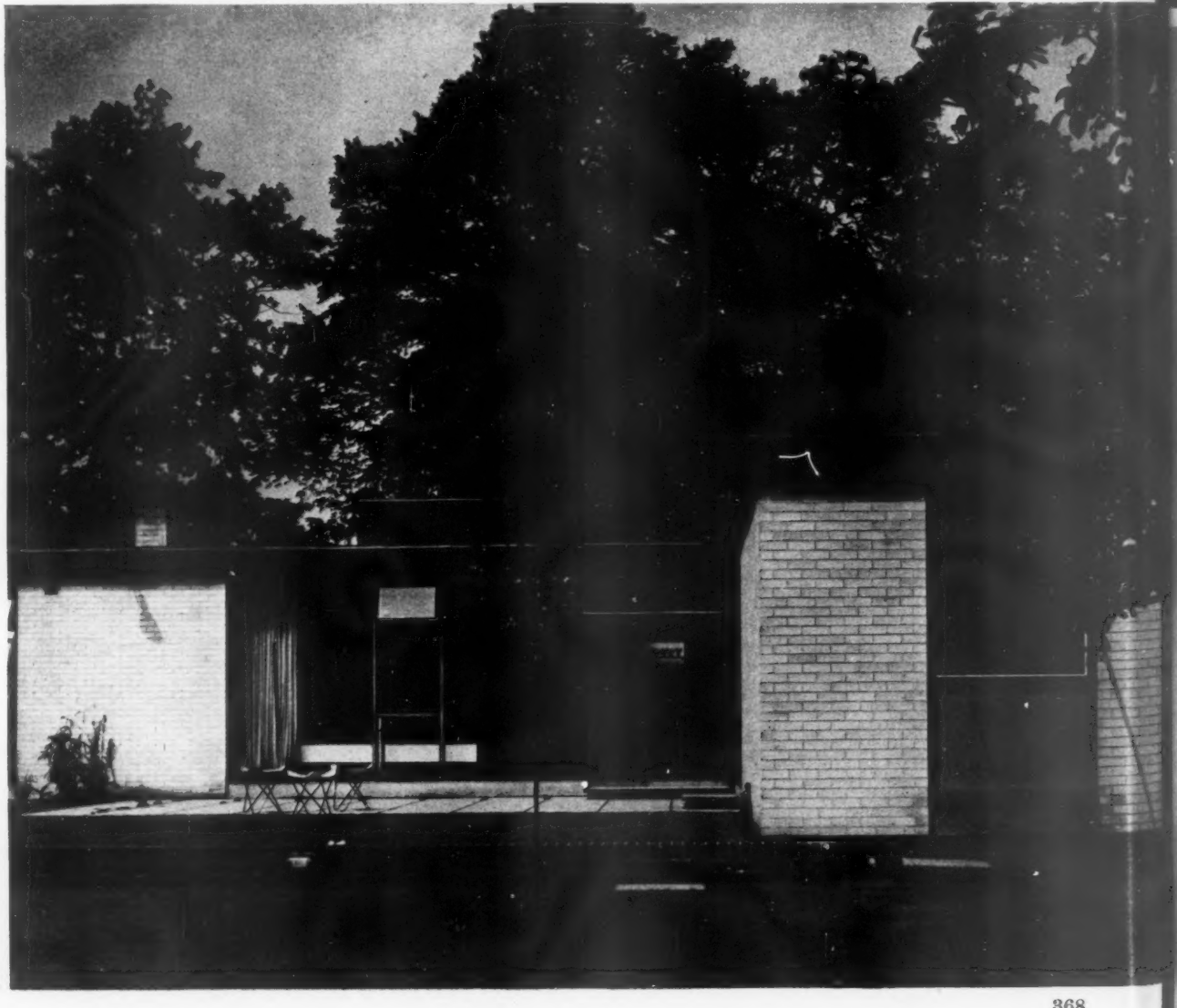
ARCHITECTS | **JAMES CUBITT AND PARTNERS**

The site, formerly the orchard and vegetable garden of a large nineteenth-century house, has a 107-ft. north frontage to Avenue Road and a depth of 120 ft., and is surrounded by a high hedge.

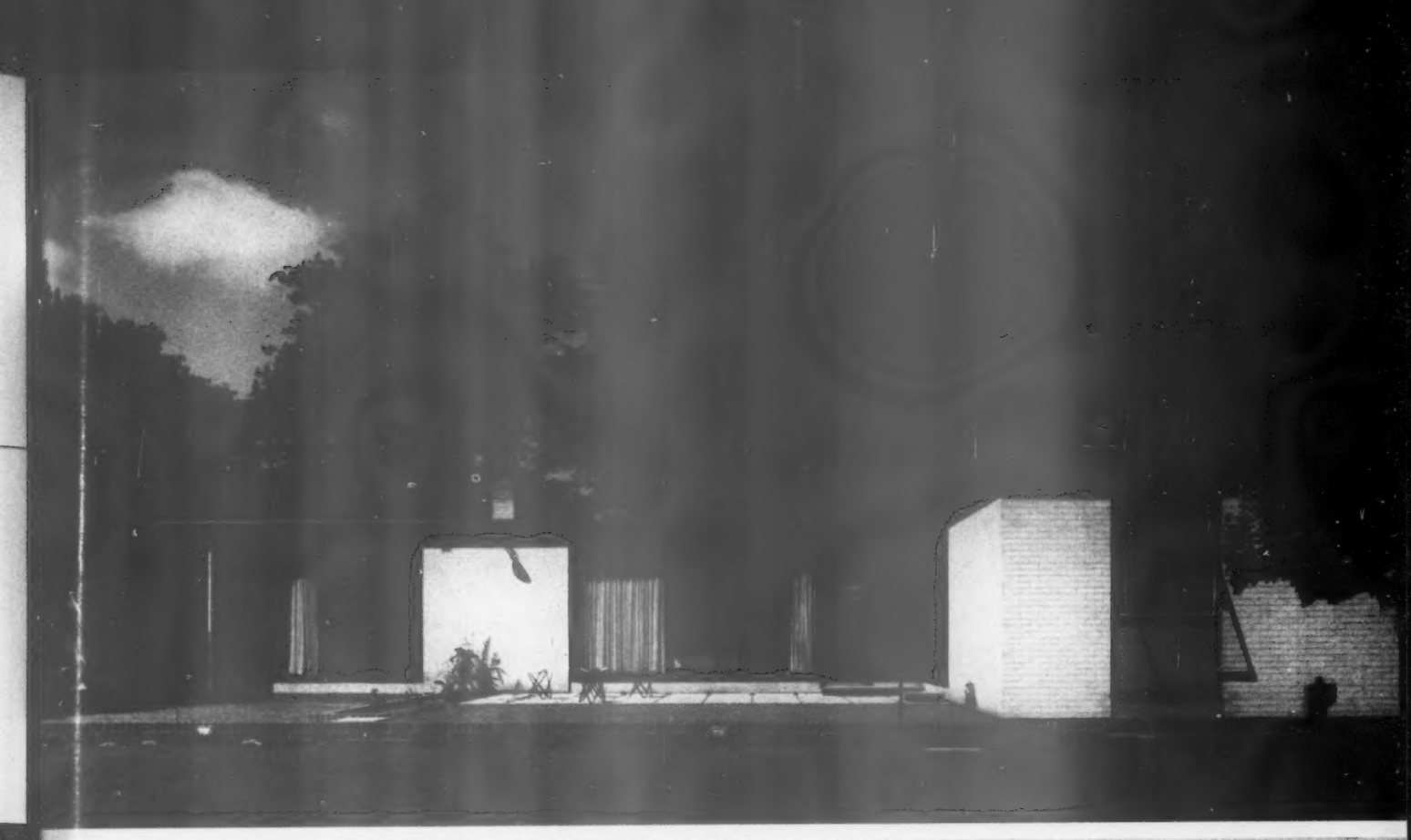
The new house was placed only a few feet from the screen of hedge and trees fronting the road; the north elevation has consequently been kept almost blank, the area in between being treated with cobbles and paving.

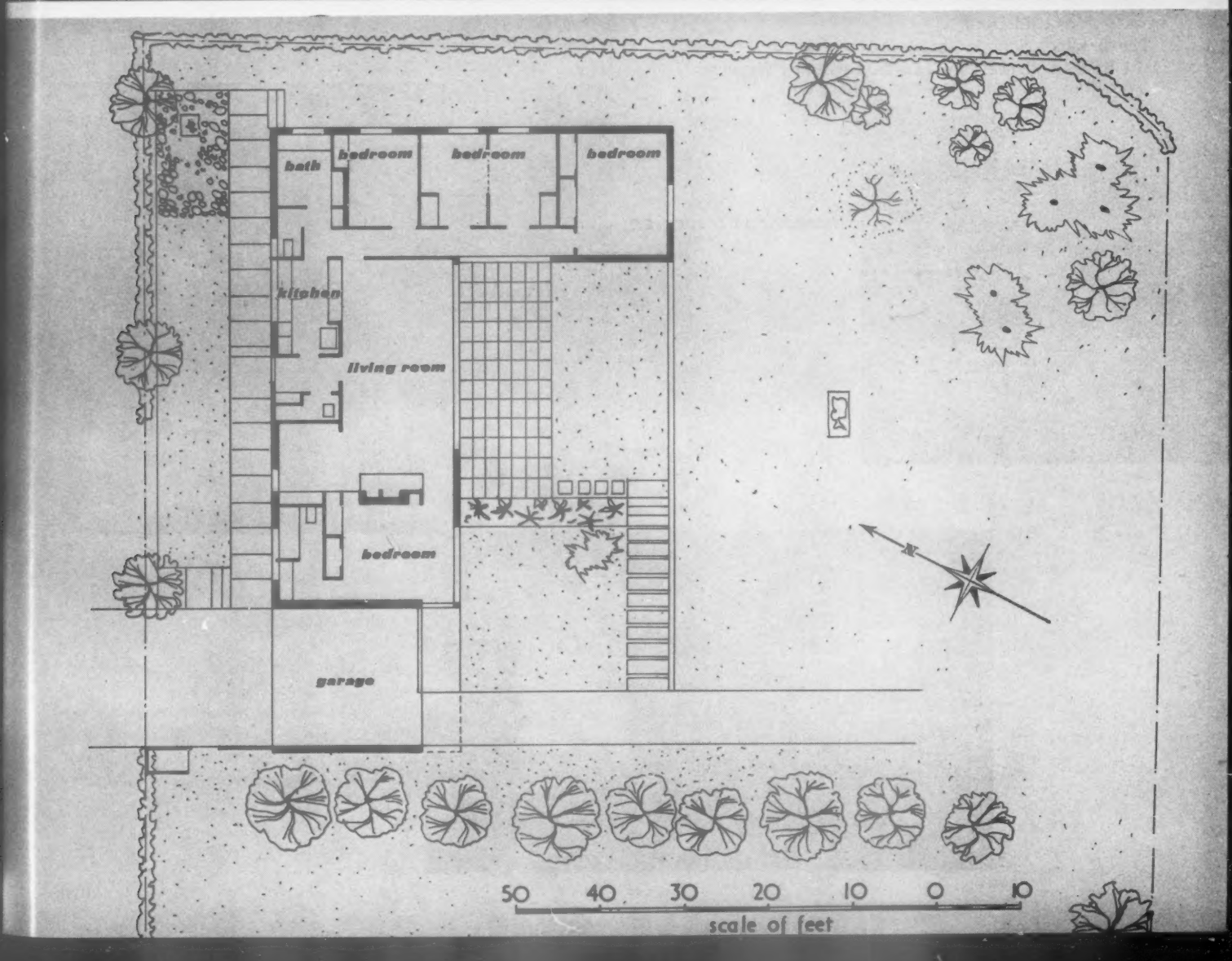
The plan divides virtually into two wings, the parents' and the children's, linked by the kitchen which, since there is no corridor between the two, can be used as access. The parents' wing contains the living area and master bedroom, with its own bathroom. The south wall of this area consists almost entirely of double glazing. The single entrance serves both the kitchen and entrance-lobby, which has a slightly lower ceiling, partly

1, the garden front, with the children's bedroom wing on the right and living room in the centre.
2, opposite, a general view showing the main bedroom and garage to the left of the living room.



1



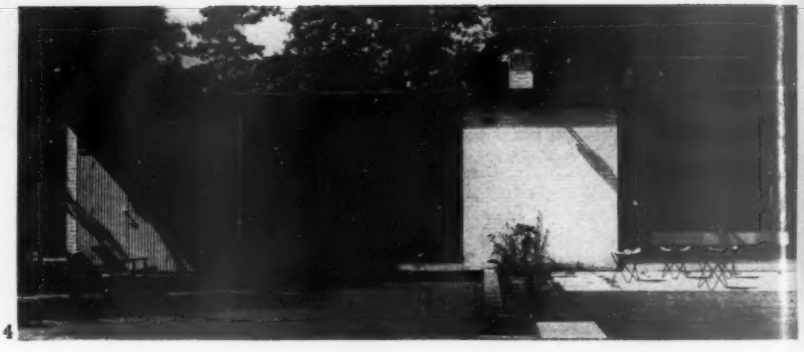

bath
bedroom
bedroom
bedroom
kitchen
living room
bedroom
garage
50 40 30 20 10 0 10
scale of feet

3

for storage above and also to accentuate the height of the living area. The kitchen was designed in great detail because of its part-visibility from both the lobby and the living-room. Although it has a small low window for view, it depends for illumination on a large domed rooflight.

Construction is of 11-in. cavity walls. The roof is of 2-in. wood-wool slabs on open-web joists, screeded and finished with roofing felt and ½-in. macadam. The floor is in 6-in. concrete on hardcore, screeded and finished with wood blocks or linoleum.

The fireplace wall in the living-room is of Burwell white bricks with shelf and hearth of polished Westmor-



4

5

3, looking through the living room to the main bedroom. 4, the west end of the garden front. 5, the

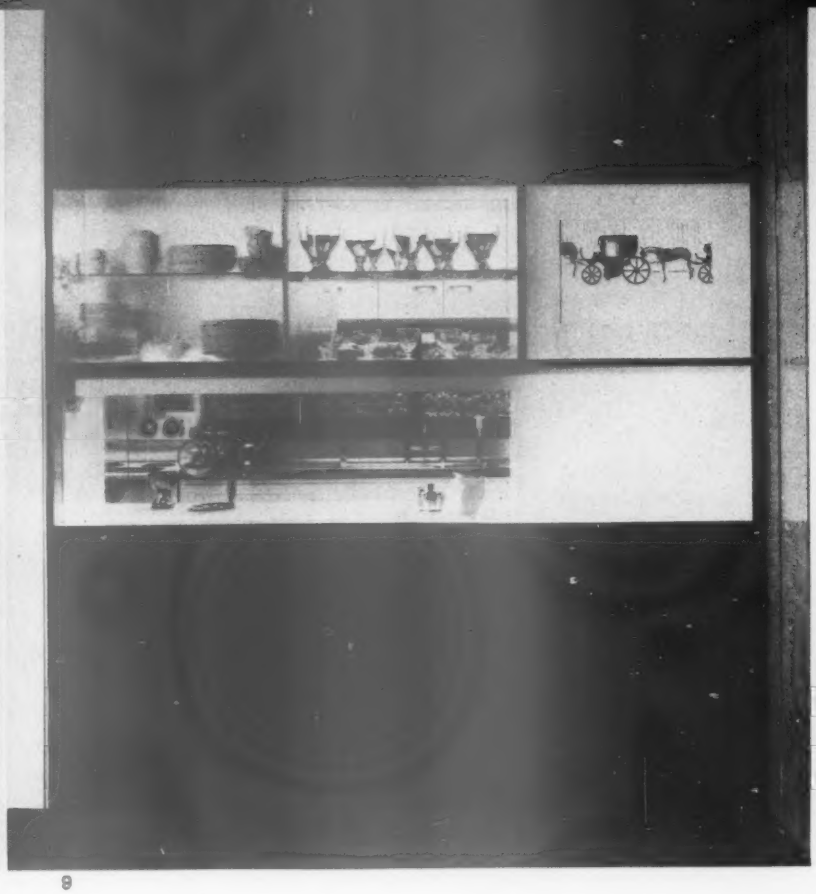
HOUSE AT LEICESTER

basin in the main bedroom, set in a slate shelf with cupboards underneath. 6, the entrance (north) front; the narrow window on the right lights part of the living room. 7, the living-room fireplace and log store.

6

7

8



9

10

8, corner of the living room with veneered pear fitted-cupboard and north-facing window. 9, rosewood serving hatch between kitchen and dining area. 10, the dining area itself, at the eastern end of the living room. 11, the entrance from Avenue Road.

land stone. The adjacent cupboard fitting is veneered in pear. The fitted desks and shelves on the opposite wall are mahogany.

A special rosewood-veneered fitting between the kitchen and dining area serves both as a hatch and for storage. A rubbish disposal unit is incorporated with the sink. The house is floor heated by means of copper pipes laid in the screed, which are fed from a gas boiler in a chamber off the entrance hall.

11

STU
AL
HA
RA
BERS
NSTA
URA

Because advertising is even more transient than other forms of commercial art, the relics of the vigorous vernacular in which the daily dialogue of Victorian consumer and producer was conducted have largely disappeared. That vernacular deviated with noble self-confidence far from the classical legacy of eighteenth-century design, and reached one of its apotheoses in the House-styles of the great brewers, discussed in Brian Spiller's article below, and epitomized, opposite, by the silhouettes of that epoch's characteristic hanging lamps, swinging above the ghosts of a great tradition of decorative lettering. The intervening years of ghastly good taste have not altogether obliterated the remains of that golden age of commercial design, and enough of them survive in Brewers' houses to provide a solid traditional basis on which to create a new commercial vernacular.

Brian Spiller

BREWERS' HOUSE STYLES

The brewing industry in its modern form grew up in 18th century London. In that period the 'common brewers', exploiting the advantages of large-scale production and door-to-door delivery, ousted the 'brewing victuallers', who then became retailers only. Rumbling drays, built to carry three butts, and drawn by two massive horses in tandem, symbolized the emergence of the factory system. London's 'capital brew-houses' were the marvel of foreign visitors; their owners counted among the first 'New Men' of the Industrial Revolution. Many of them, even today, are still owned by founders' kin, thanks to the ability of successive generations to heed Sir Benjamin Truman's warning: 'Grandson, there can be no other way of raising a great Fortune but by carrying on an Extensive Trade'. Extensive—and steady: for to keep their plants in constant commission, and yet avoid over-production, brewers needed an assured output. This could be achieved only by controlling retail outlets. And so in the second half of the century the brewers took steps to ensure pub custom.

There were then two methods of securing the trade of a pub: buying up the lease or lending the owner money. In either case the publican contracted to buy from that particular brewer. If he was satisfied with the beer, all was well; if not, he could usually pay off the mortgage or loan by borrowing from another brewer. The licensing system encouraged the practice, for once the trade of a pub had been tied it was difficult for a rival to set up another house in the immediate neighbourhood. In 1817 a Select Committee of the House of Commons reckoned that one half of London's pubs, and a growing number in the provinces, were tied houses.

As the partnership between producer and retailer solidified, the brewer's signboard began to appear above the door. The earliest example in the British Museum's Print Collec-

tion is dated 1816. Ten years later Truman's included signboards in their annual valuations for the first time. From now on, though publicans were still the real or nominal owners, the brewers used tied pubs as their shop windows. 'We rarely if ever see any change in the name of the brewer who supplies a particular house', George Dodd, author of *The Food of London*, wrote in 1856; 'the inscription "Barclay, Perkins & Co.'s Entire" adorned the front of the "Red Lion" twenty years ago, as it does now, and will probably do twenty years hence; Truman, Hanbury & Buxton cling to the "Lord Nelson", year after year; and "Henry Meux & Co.'s Entire" has been the beverage supplied at the "King's Head" for a generation past.'

In the last quarter of the 19th century, the loan-tie and the leasehold-tie yielded to outright ownership. An Act of 1869 brought beer-houses back into the licensing system. The justices, strengthened by a series of judgments culminating in *Sharp v. Wakefield*, 1891, used their powers to cut down the numbers of licences, grossly inflated by 'free trade'. Frightened of losing their secure outlets, or attracted by the prospect of poaching on each other's trade, the brewers embarked on a scramble to buy up freeholds and leaseholds. Vast numbers of pubs changed hands at ever-rising prices. Many small breweries could not stand the pace; some of the greatest had to write down their capital; between 1881 and 1900 the number of 'brewers for sale' dwindled from nineteen to six thousand. Amalgamation continued; so that today 65,000 pubs in England and Wales, or 89 per cent. of the total, are owned by about 400 brewers. In Scotland, where brewer-ownership is not supposed to exist, the older form of mortgage-tie is common enough.

Having acquired shoals of pubs, the new owners set about making them look like *their* pubs. The surveyors' and signwriters' departments were kept busy. Huge signboards, handsomely inscribed with the brewer's name, marched across the skyline and the fascia, where the publican's name disappeared; others appeared on gables and corners, hypnotizing all comers from all directions; raised grotesque letters spelled out the names of prize ales and celebrated stouts on ground floor windows; glazed advertising plaques flanked the doors or stood at dog's eye level above the pavement. Satisfied that everything had been done to ensure that no sighted customer could possibly enter a rival house by mistake, some managements were content to leave the actual structure untouched. Others, more ambitious, sought maximum advertising rewards by applying an architectural uniform. Often enough the treatment was Tudoresque, the assumption being that this was what the customer liked best. As one brewer has written, 'we did not think of ourselves as patrons of art. We were out to sell beer in premises which the people liked; and at that time they loved Brewers' Tudor, and some do still.' Neo-Georgian followed, at a time when the great banks, the General Post Office and other architectural *bien-pensants* were going for the same thing. It was usually not so much a question of distinctive house styles as of follow my leader.

At the present time house-styled exteriors are out of fashion; even firms that once favoured them, such as William Younger or Style & Winch, seem to have changed their minds. The volume of advertising material on façades has been much reduced, on the principle that the eye ought not to be glutted and benumbed, but should rather focus on some feature common to all the owner's houses: a single distinctive fascia, an illuminated lantern, a stylized inn sign, a house-mark. Many brewers use standard lettering forms and colour combinations for fascia-boards—often for vehicles too, with their great

[continued on page 381

BREWERS' HOUSE STYLES

1

Mid-twentieth century publicity ranging, as it mostly does, from the moronic to the gimmick, is seldom content with mere straightforward statements; yet bold and characterful typography can contribute more than most other kinds of publicity to the outdoor or indoor scene. It was through vigorous lettering and simple trademarks that brewers made their commercial individuality plain to the nineteenth century man in the street and, in the process, did much to adorn that street. But a sense of guilt over what they seem to conceive as vulgar beginnings has brought about a fatal decline into genteelism in brewers' house styles. The following pages trace this decline. Happily they also show the first signs of a rebirth of vitality, rare as yet, but gathering momentum, as it must in a sphere of activity where robustness in design is second in importance only to the quality of the brew.

exteriors

2

3

4

5

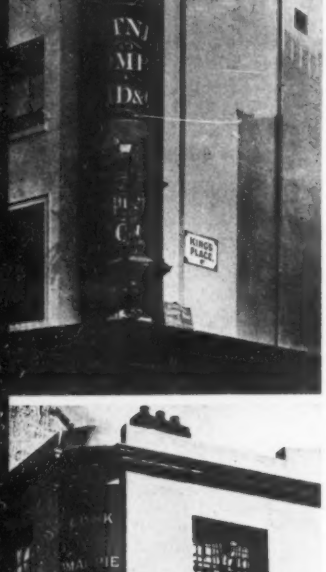
Titlepiece, 1, The World Turned Upside Down, *Old Kent Road* (1868–1932); *intriguing when seen once, its repetition would be intolerable, and the essence of house style design is to provide for repetition without refining away character.* 2, *the former* Amhurst Arms, *Shadwell: the fat-face letter used with pungency and elegance (see also* 4). 3, *the* Britannia, *a pre-war house in Ironmonger Row, E.C., which serves the demands of publicity as little as it does that of conviviality.* 4, *the* White Swan, *Farringdon Street, E.C.; another dignified and lively use of the lettered advertisement, in contrast to* 5, *the* York Minster, *Dean Street, Soho, which would greatly benefit from good lettered boards and signs.* 6 *and* 7, *two country pubs: the* Falcon, *Huntingdon, and the* New River Arms, *Turnford, Herts. In favour of the first; building on the road with parking behind, bold and beautiful lettering, simple but welcoming façade. Against the second; desert of unwelcoming asphalt, mean lettering, genteel private house architecture.*

6 7

corner boards

8, *in Long Lane, Bermondsey, corner board with skilfully varied letter faces.*

9, *in Marylebone, W.1, a boldly curved board which was a real asset to street architecture.*

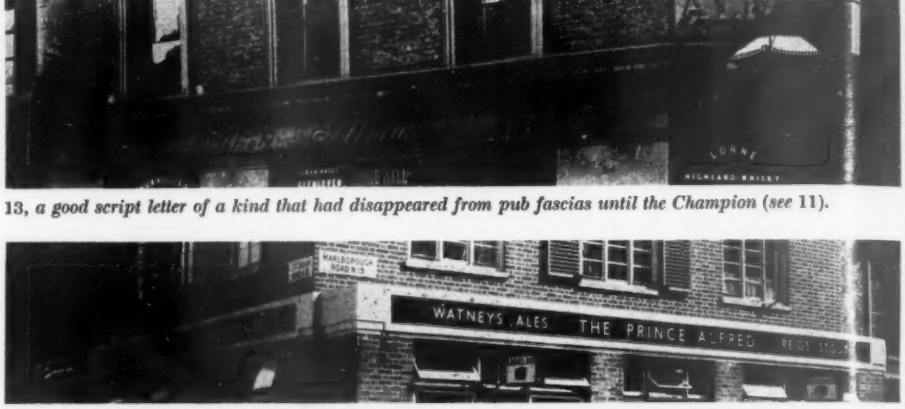


10, *the decline—shrunken and badly shaped board and characterless letter faces with too much space between lines (note also the lamp here and in* 11, *in contrast to the two above).*

11, *the tradition revived—a painted corner sign in Wells Street, W.1, in the best vein of nineteenth century publicity (date 1954).*

12, *a nineteenth century skyline board in the satisfying Watney house style of the time.*

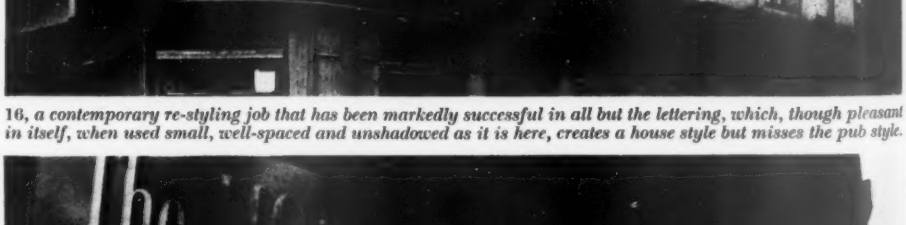
13, *a good script letter of a kind that had disappeared from pub fascias until the Champion (see* 11*).*



14, *a fascia remarkable only for lacking all style and which, unfortunately, can be very easily reproduced.*

15, *leaving aside the architectural treatment this type of vitiated Trajan letter has been responsible for a great deal of dreariness in our streets. With its air of spurious gentility it is particularly inappropriate for pubs.*

16, *a contemporary re-styling job that has been markedly successful in all but the lettering, which, though pleasant in itself, when used small, well-spaced and unshadowed as it is here, creates a house style but misses the pub style.*



17, *an excellent condensed fat-face in gold and black on red which is consistently exploited by this brewer.*

18, *the Champion again (see* 11*): a really fine example; exactly what a brewer's house style can and should be.*

labels *It is on his bottle labels that the brewer concentrates most of the effort to create an immediately recognizable house style. Those reproduced on this and the next page are thirty-six selected from among many hundreds. (They are numbered independently from the other illustrations.) The best from the points of view of distinction, legibility and character are those that rely on lettering and a simple, but bold, trade-mark. On this page* 4, 6, 10-12 *and* 15 *are particularly effective. For the history of* 10, *one of the best pieces of publicity the nineteenth century produced, see this month's cover.*

labels cont. *From among the eighteen beer bottle labels reproduced on this page, 19, 22 and 26 stand out immediately. In each case they exhibit the boldness and vigour that was the nineteenth century's contribution to commercial design. Owing, however, to the fatal fallacy that its boldness was vulgar, this contribution has been ignored with great loss particularly to the brewers.*

house marks and plaques

19

20

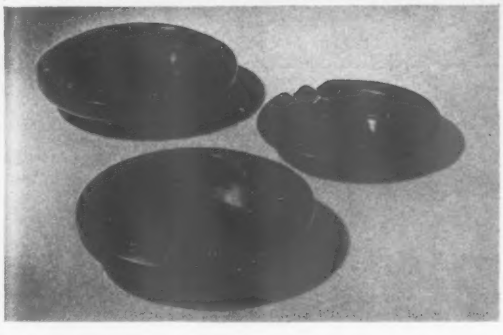
21

22

19 *and* 20, *two wall plaques, of a kind that are used widely as eye-level publicity: no attempt is apparently made, other than by the reproduction of a label, to give them individuality.* 21, *a modern house mark which, as its name suggests is designed to possess individuality; artiness in this one makes it ill-suited to its purpose.* 22, *two house marks designed by Milner Gray for Courage, the freestanding one being particularly successful as a crisp and forthright emblem.*

equipment

23
24

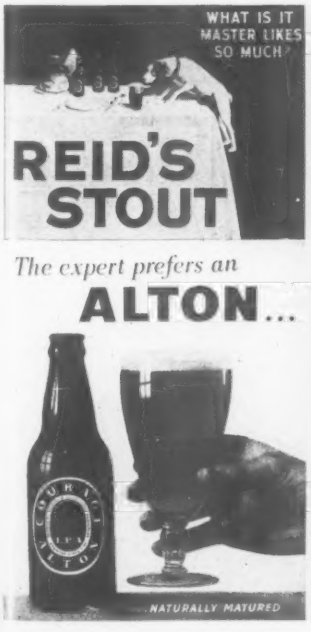


25

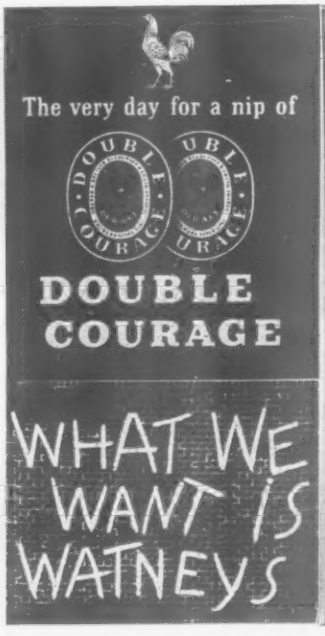
23, 24 *and* 25, *a selection of house equipment, all designed by Milner Gray for Courage (with Benskins) the only brewer that carries a consistent design policy through all its publicity and equipment to create an immediately recognizable house style.*

publicity

26
27



28
29



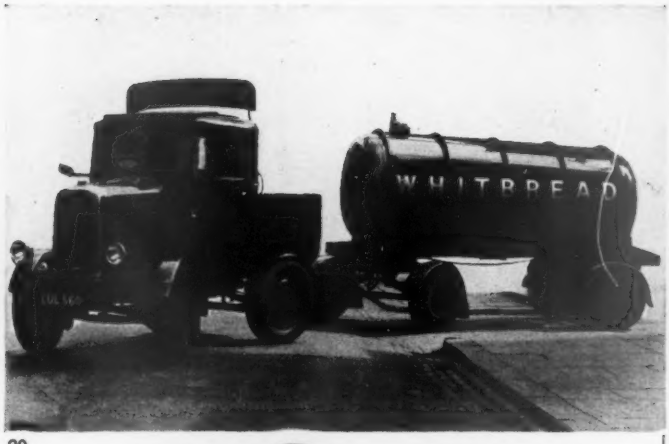
30

WHAT THE SITUATION DEMANDS
1. WHEEL for getting shoulder to
2. SOCKS for pulling up
3. STONE for not leaving unturned
4. BRASS TACKS for getting down to
5. TRUMP CARD for playing
6. BOLD FACE for putting on it
7. BELT for tightening
8. GUINNESS for strength

26, *a Watney poster of the Edwardian era, designed by Francis Barraud and reminiscent of his longer-lived advertisement for H.M.V. A now very 'period' use of the animal in brewers' advertising, a theme developed later in a more sophisticated way by Guinness.* 27 *and* 28, *two advertisements of which the second gains immeasurably from avoiding the realistically reproduced article and exploiting the Courage house style—good lettering and a simple bold trade mark.* 29 *and* 30, *two examples of the clever gimmick, which have been so successful they have* faute de mieux *almost become house styles in themselves.*

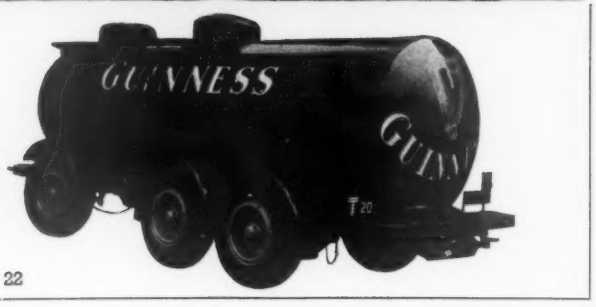
transport

19



20

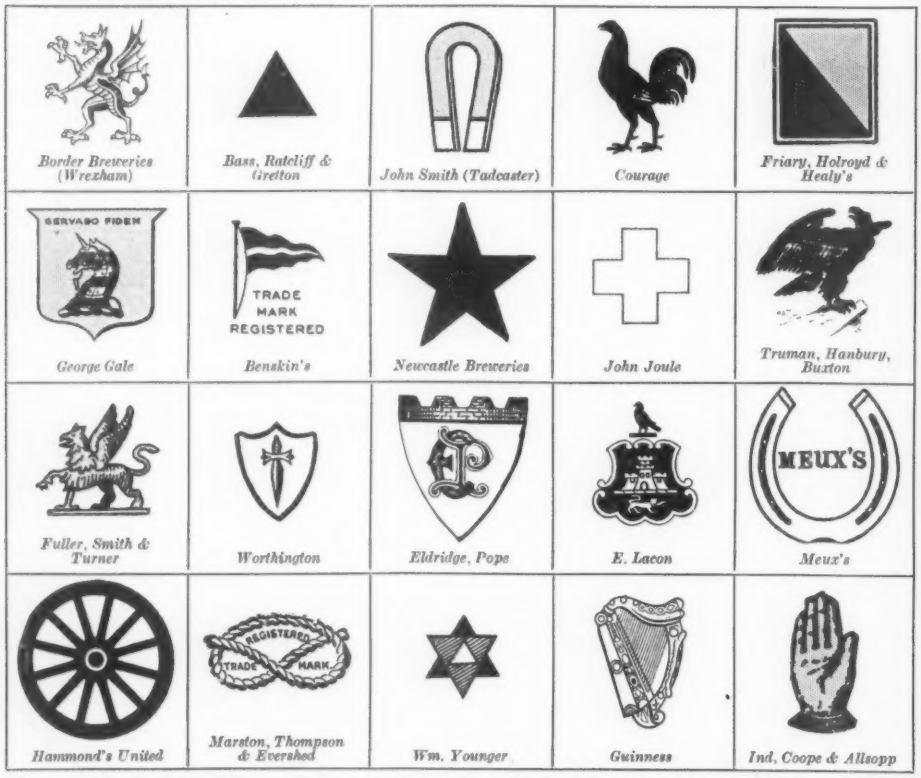
21



22

19, one of the earliest Whitbread lorries c. 1910 and, 20, a bulk bartanker of 1938. 21, a Guinness Scammell prime mover and trailer of the early 1930's and, 22, a Guinness road tanker of 1955. Apart from the harp on the back of the Guinness tanker, there is little attempt made to reflect house styles in brewers' transport, which is strange, since this is something that most other industries exploit to the full, for better or worse.

trade marks

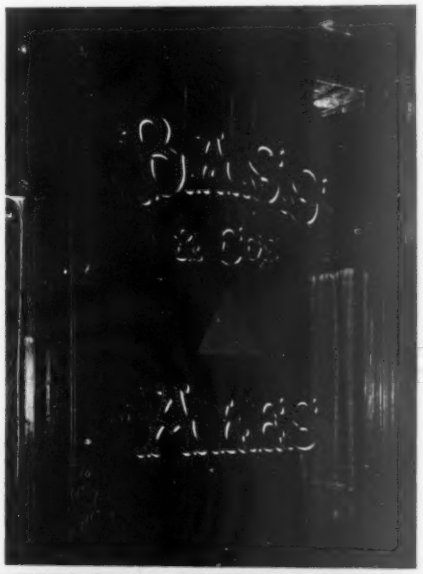


Border Breweries (Wrexham) | *Bass, Ratcliff & Gretton* | *John Smith (Tadcaster)* | *Courage* | *Friary, Holroyd & Healy's*

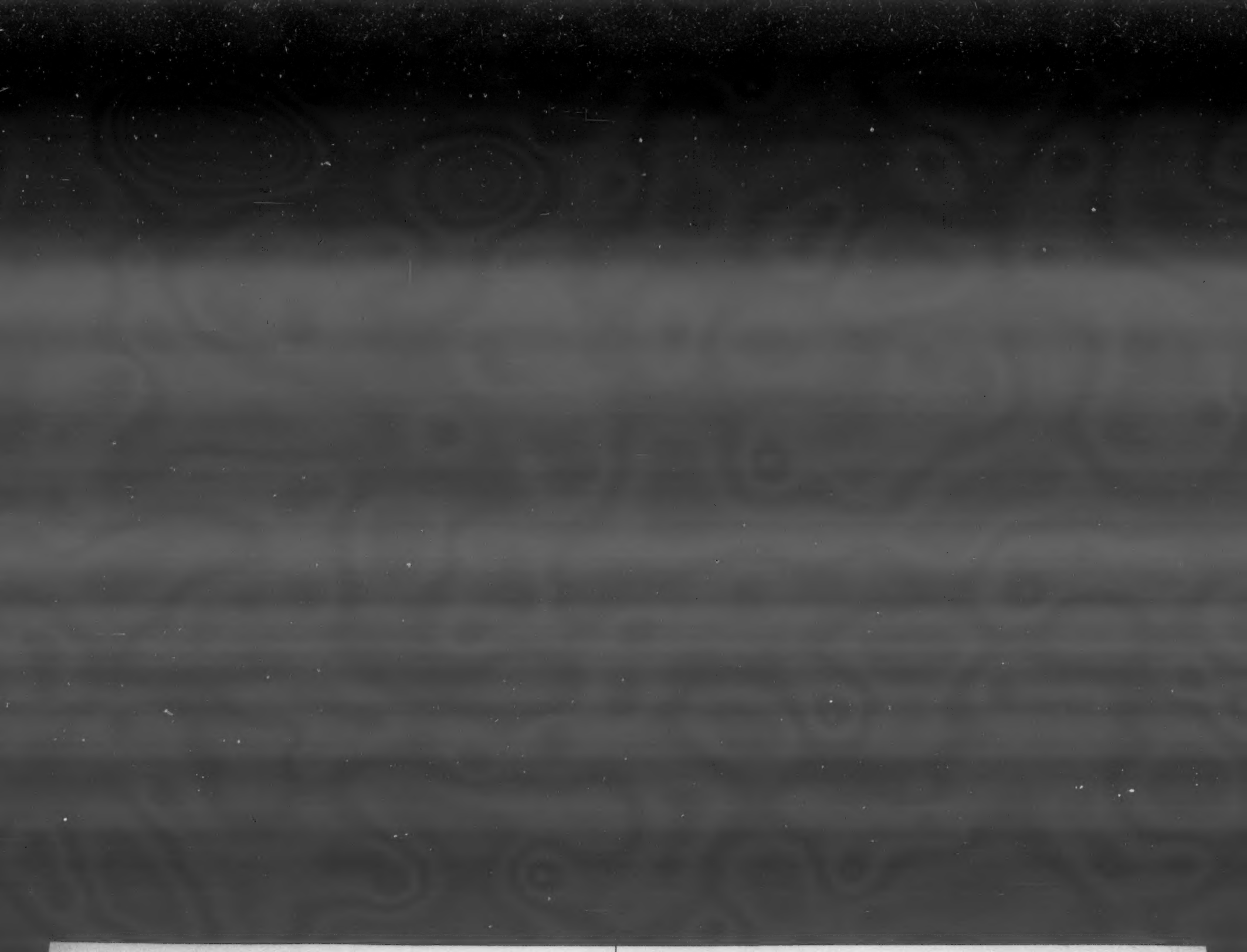
George Gale | *Benskin's* | *Newcastle Breweries* | *John Joule* | *Truman, Hanbury, Buxton*

Fuller, Smith & Turner | *Worthington* | *Eldridge, Pope* | *E. Lacon* | *Meux's*

Hammond's United | *Marston, Thompson & Evershed* | *Wm. Younger* | *Guinness* | *Ind. Coope & Allsopp*



Above, a selection of twenty brewers' trade marks, the basic material, alongside lettering, of the house style. On the right, two mirrors painted and engraved with now famous lettering and trade marks. It is particularly sad that this craft has been allowed nearly to die out, since it is a form of pub decoration that combines many virtues —glitter without vulgarity, a sense of space without bleakness and the feeling of a crowd without too many people.

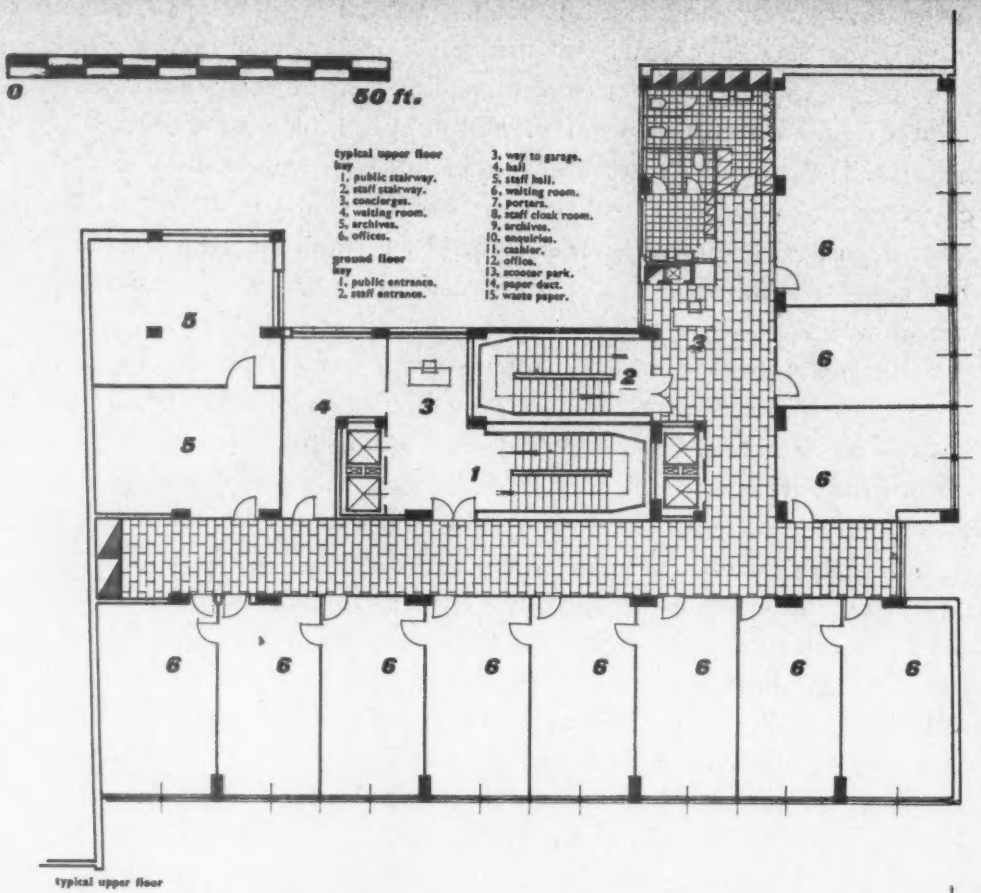


T

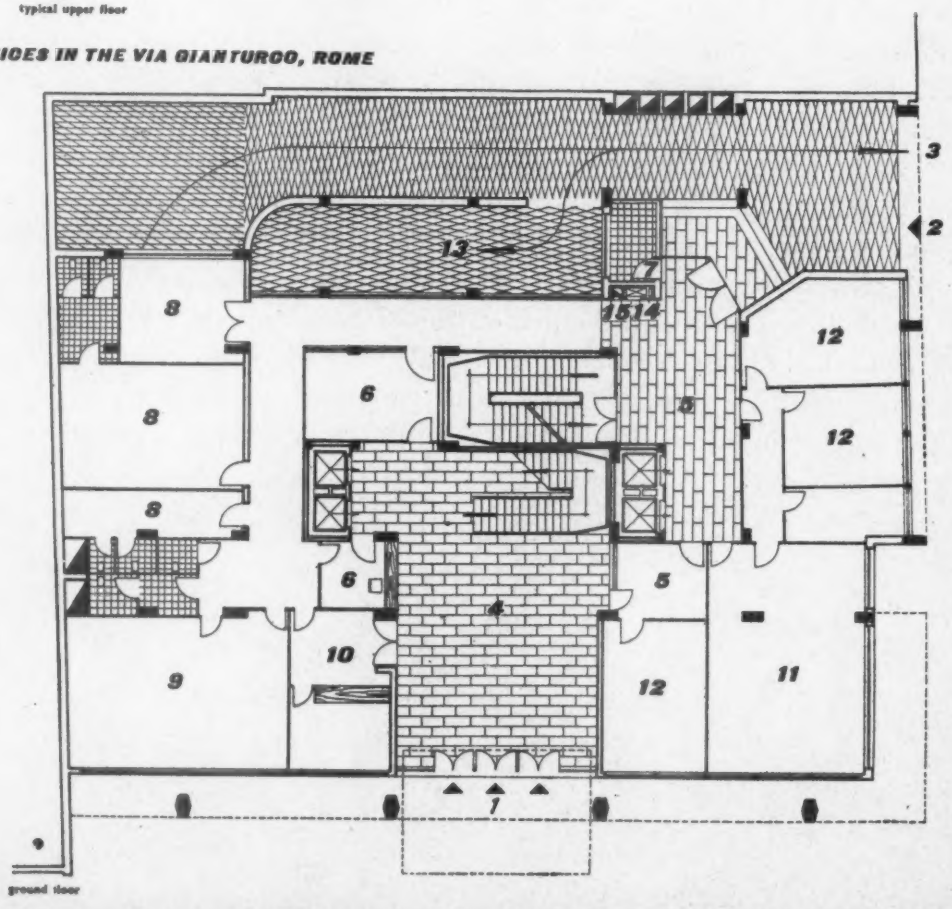
continued from page 374]

value as mobile advertising stations. One must be wary of generalizing about so widely dispersed, heterogeneous, instinctively conservative but by no means hide-bound industry. Still, it is safe to say that although brewers want to emphasize their ownership of a pub, they do not want all their pubs to look exactly the same, like so many branch stores. The general opinion seems to be that a new pub should suit the needs of its local custom and be designed to fit into its surroundings—a theory fostered, if not enforced, by the justices and local planning officers who hold the whip hand in these matters. In any case, most of a brewer's pubs are already there, in every conceivable shape, size, style and situation.

Next to architecture, the brewer's interest in design centres on his bottle labels. A company's range of labels has usually a strong family resemblance; often enough the basic design is of long standing, though it may have been progressively simplified. But there seems to be little enthusiasm for centralized design policies embracing all the articles commonly used inside the pub: glassware, cutlery, waiter trays, drip mats, mirrors, dart boards, show cards, menu cards, calendars, notice boards and so on. This may seem odd, because most of these things are already exploited for advertising purposes. The objections are not far to seek. First, a pub's individuality is one of its greatest assets, so it may be argued that standardization can be overdone. Second, the cost of going the whole hog has got to be carefully weighed, though the example of Courage's, who have gone some of the way, proves that it can be done. Not unnaturally, brewers want to know how far the cost of improvements will be met by commercial returns. And since they must aim at pleasing customers rather than arbiters of elegance, official or self-appointed, they wonder whether a fashionable designer's idea of what looks good will be shared by the man in the Public Bar. It may be that it is, for whenever glassware, ash trays or other movable objects have been specially designed they have rapidly found their way into customers' pockets and handbags. Scarcity value may have been the motive, for most of these things are painfully shoddy. Yet there are brewers who would prefer to have them well made, and a few who care deeply. Well made—not too consciously 'designed'; because if they are too slick or sophisticated they will not look right in an ordinary pub. 'Commoditie, Firmnesse and Delight', to use Wotton's famous definition, are what is wanted. This combination of qualities underlies the best-looking and most appropriate objects peculiar to the industry, whether a dray, a Benskin signboard, a carved country inn sign or a Bass label. The pick of all these are probably not the work of 'designers' at all, but of simple, anonymous men trained in the disciplines of a traditional craft. It is a sobering thought.



OFFICES IN THE VIA GIANTURCO, ROME



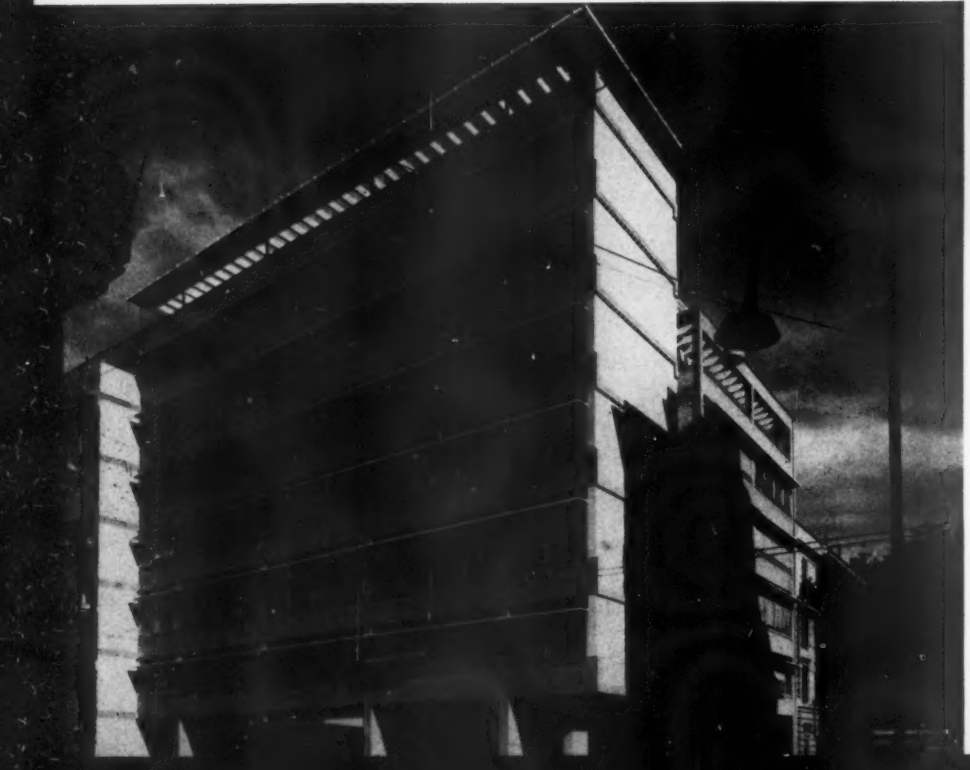
RECENT WORK BY

LUCCICHENTI AND MONACO

1, offices in the via Gianturco, Rome: street elevation.

OFFICES IN THE VIA GIANTURCO

The first five of these schemes are in Rome ; the sixth, at Santa Marinella, is on the Tyrrhenian coast. The office block in via Gianturco, seat of the Società Italiana degli Autori ed Editori, is of *in situ* concrete, aluminium and travertine. The offices are turned towards the outside, and stairs and services towards the inner court. The window unit, corresponding to the module of secretarial table, chair and filing-cabinet, is aluminium-framed and double glazed, with horizontally-pivoted venetian blinds between the panes. Small ventilation panels are set back between the *brise-soleil* and the floor slabs. It was designed in co-operation with the architects Passerilli.



Top, return elevation showing travertine infilling. Above, staff staircase. Left, block seen across the via Gianturco.

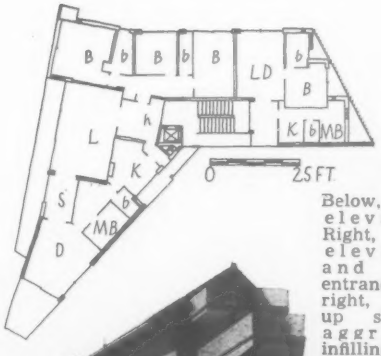
The small block of flats in via di villa Sacchetti is irregular in plan. Thus, for the sake of unity, a single infilling material has been used throughout—an aggregate of tufa, peperino and travertine, carefully blended for colour and texture.

The flats in via Stoppani vary the infilling panels from floor to floor, within identical thin floor slabs, and corresponding to a rigid modular unit. The panels are faced with terra-cotta bricks; the floor-slabs fascia and soffit, and window parapets are faced with venetian mosaic, and the ground floor is faced with polished granite and anodized aluminium.

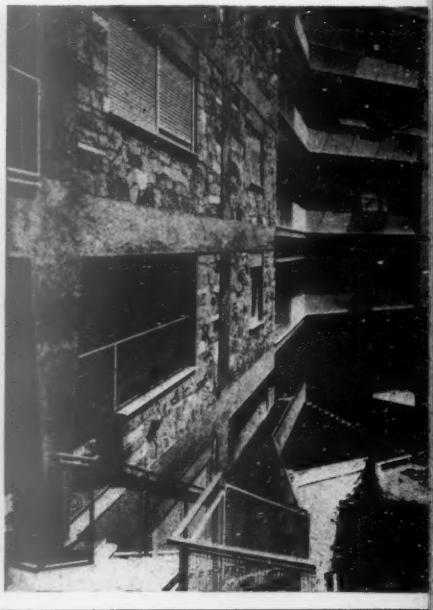
The elevation of the flats in via de villa Grazioli is divided into strongly marked horizontal planes, with structural columns mostly visible, but is differentiated by varying, for example, the positions of stone panels corresponding with chimney corners and the lengths of the concrete flower boxes on the outside of the balconies. The glass-panelled balustrades are continuous. The chimney panels are of mixed stonework, composed of tufa, peperino and travertine; elsewhere the structure is cement-rendered or stuccoed and painted. The colours are: under the balconies, blue-grey; the fascias white, walls ochre-red, balustrades dark blue. Surrealist chimney-covers are by Nino Franchina.

The elevational pattern of the flats in via Po is derived from the ends of the cantilevered beams, the fascias of the thin floor slabs, and the parapets. Behind it, separated from it by the continuous parapet, the balconies or by the corner dining terraces, are the glazed surfaces of the structure. On the sides, where available depth was restricted to 60 cm., the surfaces consist only of the floor-slab fascias and the wall-structure. The set-back attic floor is shaded by a slab. The materials are straight

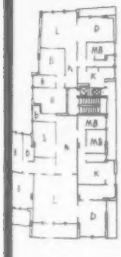
FLATS IN THE VIA SACCHETTI

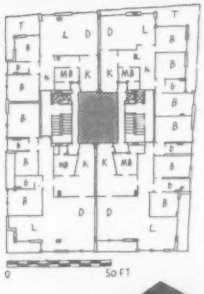


Below, street elevation. Right, side elevation and main entrance. Far right, close up showing aggregate infilling.



FLATS IN THE VIA STOPPANI



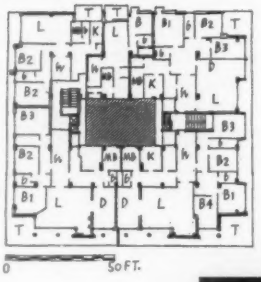


Below, view from the via Stoppani. Right, recessed entrance: ground floor panels are faced with granite and anodised aluminium.

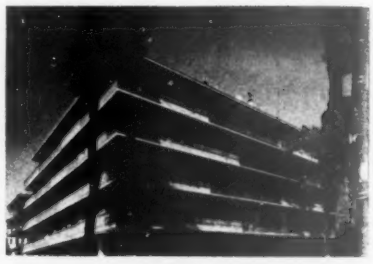
joint terra-cotta brickwork, painted stucco, river-gravel and cement rendering ; colours are red-brown, ochre, red and green.

The two blocks at Santa Marinella are situated between the shore and the main road, the via Aurelia. At ground-floor level there are only pilotis and a cantilevered stair so that the passerby has an uninterrupted view of the sea. The upper floors open towards the sea, with wide terraces cantilevered out to 3½ metres from the main structure, with variously treated parapets and a sweeping outside stair. On the road elevation the narrow service-balconies are protected by a *brise-soleil* of blue and white enamelled tiles. The materials are bush-hammered concrete, stucco, and enamelled brick ; the colours white, light grey-green, sea green and dark blue.

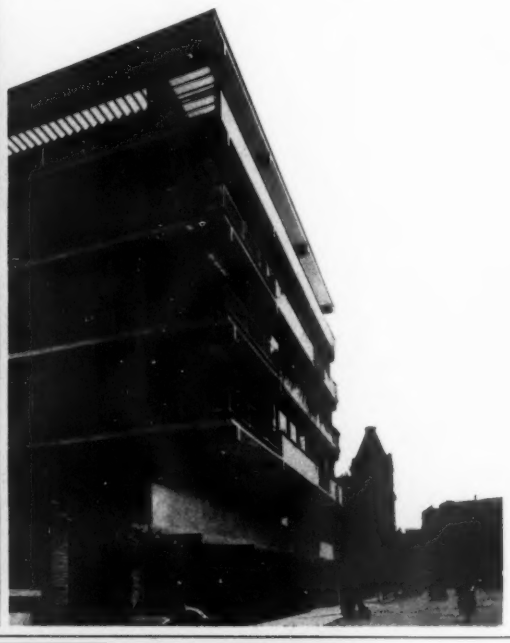
FLATS IN THE VIA GRAZIOLI

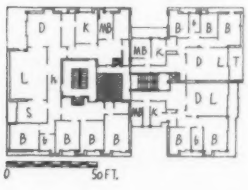


Below, general view showing strongly expressed floor slabs. Facing page, one corner of block showing recessed terraces.



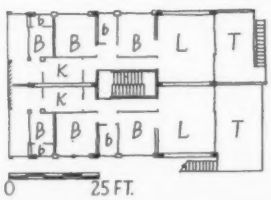
FLATS IN THE VIA PO



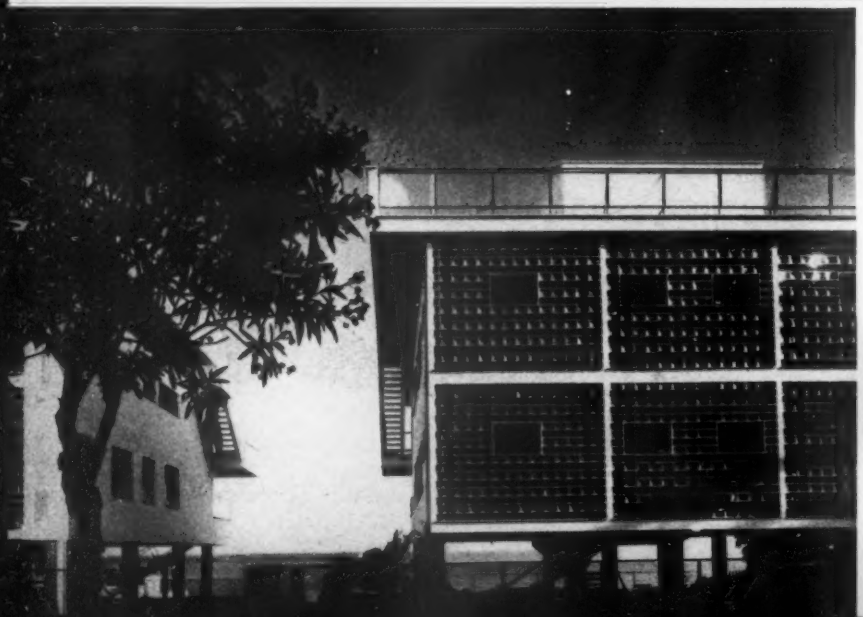


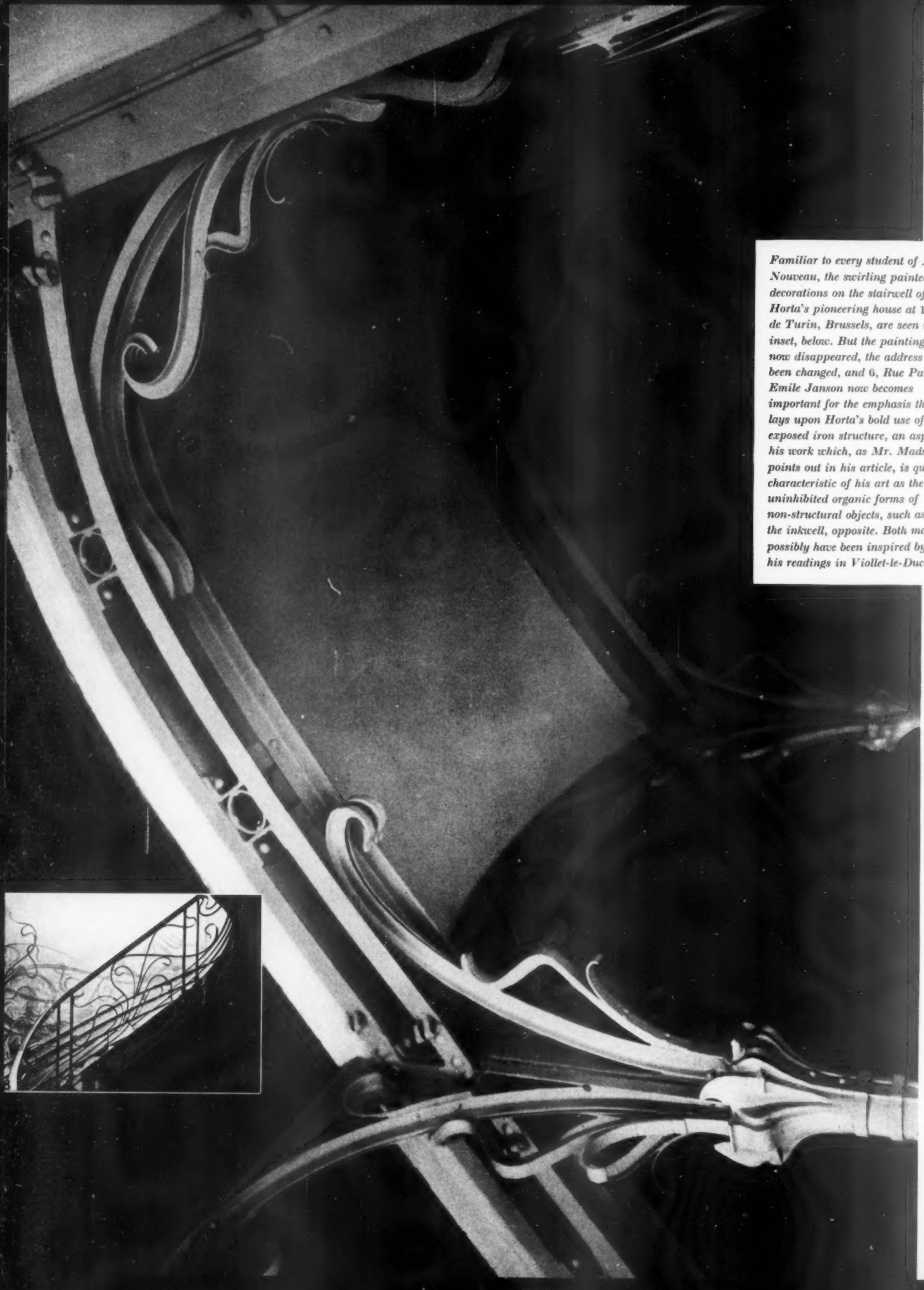
Far left, main elevation. Left, corner with dining terraces, showing the cantilevered beams and floor slabs.

FLATS AT SANTA MARINELLA



Left, seaward view between the blocks: rear elevations have blue and white brick infilling, laid edgewise. Below, pilotis and cantilevered main staircase.





Familiar to every student of Art Nouveau, the swirling painted decorations on the stairwell of Victor Horta's pioneering house at 12, *Rue de Turin, Brussels, are seen in the inset, below. But the paintings have now disappeared, the address has been changed, and* 6, *Rue Paul-Emile Janson now becomes important for the emphasis that it lays upon Horta's bold use of exposed iron structure, an aspect of his work which, as Mr. Madsen points out in his article, is quite as characteristic of his art as the uninhibited organic forms of non-structural objects, such as the inkwell, opposite. Both may possibly have been inspired by his readings in Viollet-le-Duc.*

Stephan Tschudi Madsen

HORTA

THE ORIGIN AND STYLE OF VICTOR HORTA BEFORE 1900

In 1878, Victor Horta, seventeen years old and poor, set out from the flower-covered plains of eastern Flanders to seek his fortune in Paris. He was the son of a cobbler, and travelled against his parents' wishes. He was armed with the knowledge he had gained during two years at the Academy in Ghent, the town where he was born. It is not known how long Horta stayed in Paris, but there is no doubt that these years were of the greatest importance to him. Years later, he said: 'Paris set my æsthetic sensibilities tingling . . . No school training could ever give me an enthusiasm equal to that which I always felt when looking at, or reading about, her monuments.'[1]

Back again in his own country, Horta continued his training at the *Académie des Beaux Arts* in Brussels, where he was an outstanding student, leaving in 1881. It was not difficult for him to obtain a position in the office of the architect to King Leopold II, the serious-minded classicist, Alphonse Balat (1818–95). Horta soon distinguished himself, and after Balat died he assumed charge of the office for some years. From 1892 Horta was attached to the University of Brussels, in the capacity of professor until his death in 1942. The only break was a stay in America during the 1914–18 war, where he and his wife, through their energy, acted as cultural ambassadors for Belgium and Europe.

At the time when Horta started work in Balat's office, Belgian, as indeed all European, architecture was tied to the imitation of styles of the past, though efforts were made to find a new expression by means of combinations of a number of different styles. The leading architects besides Balat were François Beyaert (1823–94), a pupil of Viollet-le-Duc, and the more influential Joseph Poelaert (1817–79), who designed the *Palais de Justice* in Brussels (1866–83). The neo-Baroque of this vast pile is famous, but Beyaert also designed in neo-Gothic, neo-Renaissance, and in a completely classical style. This eclectic historicism corresponds to the state of affairs in Britain, except that here its beginnings date back to an earlier age and the Gothic trend in its early fanciful as well as its later more severe archaeological phase was specially favoured for church buildings. That was not so in Belgium, where the tradition of classical ecclesiastical architecture was much stronger. Gothic in Belgium was a secular style influenced in particular by the spectacular *hôtels-de-ville* of the fifteenth and early sixteenth centuries. The numerous illustrations in *Architecture en Belgique 1872–76* (Liége, 1876), give a good picture of the secular architecture of the period. In the middle of the 1870's, German neo-Renaissance prevailed alongside French neo-Baroque. The first is characterized by balconies supported on caryatids, by pointed gables, and peculiar ornament. The second has a far more elaborate modelling of the wall surfaces, but smoother contours. The ornamentation is dominated by classical detail. The parallel in England would be the Elizabethan, somewhat later than Queen Anne, and in the late 1880's and the 1890's the Wren style.

In addition to these three main trends, neo-Gothic, French neo-Baroque and German neo-Renaissance, there existed in Belgium a fourth. It was nationalistic, as indeed one might expect of a nation only recently risen to national independence. The pattern here was the sixteenth and seventeenth century brick architecture with stone dressings. That industrious writer on architecture, E. Allard, who was behind the new periodical *L'Emulation*, made himself the spokesman of this movement. He said in 1876, on the question of the training of architects: 'We must try first and foremost to create Belgian citizens and Belgian artists—we must free ourselves from all foreign influences.'[2] Emile Leclercq said in the same connection: 'The first necessity, the first endeavour must be to be Flemish in Flanders.'[3] The Belgian Pavilion at the Paris Exhibition in 1878 was an example of this movement. The style here was that of Rubens.

Among these movements only the national one made serious attempts at finding solutions to real architectural problems. Its adherents admittedly tended to use their pens with more determination than their pencils, but in their theories at least they defined the dangers in no uncertain terms. Those men, especially, who founded the *Société Centrale d'Architecture de Belgique* in 1872, and started the Society's organ, *L'Emulation*, two years later, were aware of their responsibility. In the leading article of the first issue we read: 'We are called upon to create something which is our own, something to which we can give a new name. We are called upon to invent a style!' In the following years *L'Emulation* championed the new constructive tendencies in Belgian architecture. Time and again such men as Allard and Leclercq reiterate: 'Nothing is beautiful in architecture unless it is true.' 'Shun painted plaster and stucco.' 'Architecture is drifting towards decadence, towards a veritable cacophony.' But we do not only find negative criticism, new roads for the future are indicated: 'Industry, after having killed art, is going to revive it by offering us all the elements necessary for such a revival.'[4] These words were said in 1884, before Sedding in England acknowledged the repercussions of industrialization and before C. R. Ashbee had formulated his modified version of Morris's and Ruskin's programmes. They are, moreover, stronger and more pertinent than those of Lewis F. Day. The question of iron, which both Ruskin and Viollet-le-Duc had raised much earlier, was now reconsidered: 'Iron is a product of our century, why are we so afraid of using it in our new constructions?'[5] It is significant here that Poelaert was violently criticized in *L'Emulation* because he was 'lying in his work' (at the *Palais de Justice*) and giving his material a shape other than that dictated by its natural qualities.[6]

Such was the architectural situation in Belgium when in 1885 Horta designed his first houses, a group of three in the Rue des Douze Chambres at Ghent. Until then he had only designed two small funeral monuments, one in 1883, a Greek *templum in antis*, the other in 1884. He had also taken part in two competitions.[7] Of the three houses in Ghent Jean Delhaye wrote much later: 'They are straightforward and practical, well thought out and logical; there is plenty of light. They satisfy the functions which their purpose requires.'[8] They are built of red brick with arched windows on the first floor but no other decoration. *Putti*, sunk panels and a far projecting top cornice add an Italian touch. But there is no sign of the neo-Renaissance in the accepted sense, and, least of all, the German Renaissance. With their simplicity and their great restraint in decoration, the houses are distinct at once from all their immediate neighbours. Yet, while they are interesting, they are not revolutionary. Horta himself said in this connection: 'I was not so pretentious as to try and create more beautiful works than Balat; but I wanted to act in accordance with my convictions.'[9] After this commission, Horta returned to Balat's office for a short time, also travelling in the years 1884–86. The years 1886–90 are perhaps the most interesting in Horta's development; he set himself the task of creating a style, measured his own abilities, and broke with his masters. Our knowledge of those years is scanty, but we do know that they were an eventful period in the history of Belgian architecture. Poelaert's *Palais de Justice* was practically finished. It was received with mixed feelings, innumerable criticisms being made against his copying of styles of the past. Yet no one had yet freed himself from historicism. However, powerful constructional and rational tendencies were beginning to assert themselves, originating from the centre of disturbance in French architecture, Viollet-le-Duc. And other French sources, notably Emile Gallé and Eugène Grasset, drew attention to naturalism in decoration. No English influences on the other hand can be traced in Belgium until after 1890.

[1] For information and assistance I wish to thank the architects Jean Delhaye, M.S.C.A.B., and J. J. Eggericx, M.S.C.A.B., who both worked in Horta's office and allowed me to draw on their wide knowledge as well as chief librarian. Arsène Alexandre, École Supérieure d'Architécture, Brussels; and Miss Rosa Boschman, Ghent. The Horta Archives, in the care of Jean Delhaye, proved of great value too. I am also exceedingly grateful to Baroness Horta for her invaluable assistance.

Literary sources:

Courtens, Antoine. 'Victor Horta, 1861-1942,' *Le Document*, Brussels, No. 4, 1946-47, pp. 69-79.

Delhaye, Jean. 'Hommage à mon maître: L'Architecte Baron Victor Horta,' *L'Appartement d'aujourd'hui*, Liége, 1946, pp. 9-17.

Dumont, Alexis. 'Hommage à Victor Horta,' *L'Emulation*, Brussels, No. 4, February, 1946, pp. 1f.

Maus, Octave. 'Habitations Modernes. Victor Horta,' *l'Art Moderne*, Brussels, Vol. XX (1900), pp. 221-23.

Pierron, Sander. 'Victor Horta,' *Savoir et Beauté*, Brussels, Vol. IV (1924), pp. 193-202.

Art et Décoration, Paris, Vol. I, No. 1 (1897), pp. 11-18; No. 2, p. 23; *Ibid.*, Vol. XI (1902), pp. 72-75; *Art et Techniques*, Brussels, July-August No. (1913); *Der Baumeister*, Berlin, Vol. I (1903), pp. 9 sqq., 133 sqq.; *Cicerone*, Leipzig, Vol. XV (1923), pp. 160-204; *Deutsche Kunst und Dekoration*, Darmstadt, Vol. XI (1903), No. 1, pp. 148 sqq.; *L'Emulation*, Brussels, Vol. XX (1895), p. 187, plates 39-43; *Die Kunst*, Munich, Vol. II (1900), pp. 206 sqq.

Letter collection in the Académie Royale, Brussels.

[2] E. Allard, L'Architecture Contemporaine, *L'Emulation*, Vol. II (1876), Nos. 10, 11, 12.

[3] E. Leclercq, L'Architecture Classique, *Ibid.*, No. 1, Vol. III (1877), co. 1-3.

[4] The last four quotations come from *L'Emulation*, No. 12, Vol. III (1877), co. 79; *Ibid.*, No. 1, Vol. III (1877), co. 1-3; *Ibid.*, No. 11, Vol. II (1876), co. 91; *Ibid.*, No. 5, Vol. IX (1884), co. 48 f.

[5] *Ibid.*, Vol. XVII (1893), co. 111-12.

[6] *Ibid.*, No. 5, Vol. IV (1878), co. 28.

[7] In 1884 Horta was awarded the Prix Godecharles, one of the five prizes given in the competition for the prison in Verviers. In the same year he was awarded second prize in the competition for the Kursaal for Brussels, the first prize went to Acker, a neo-Renaissance architect.

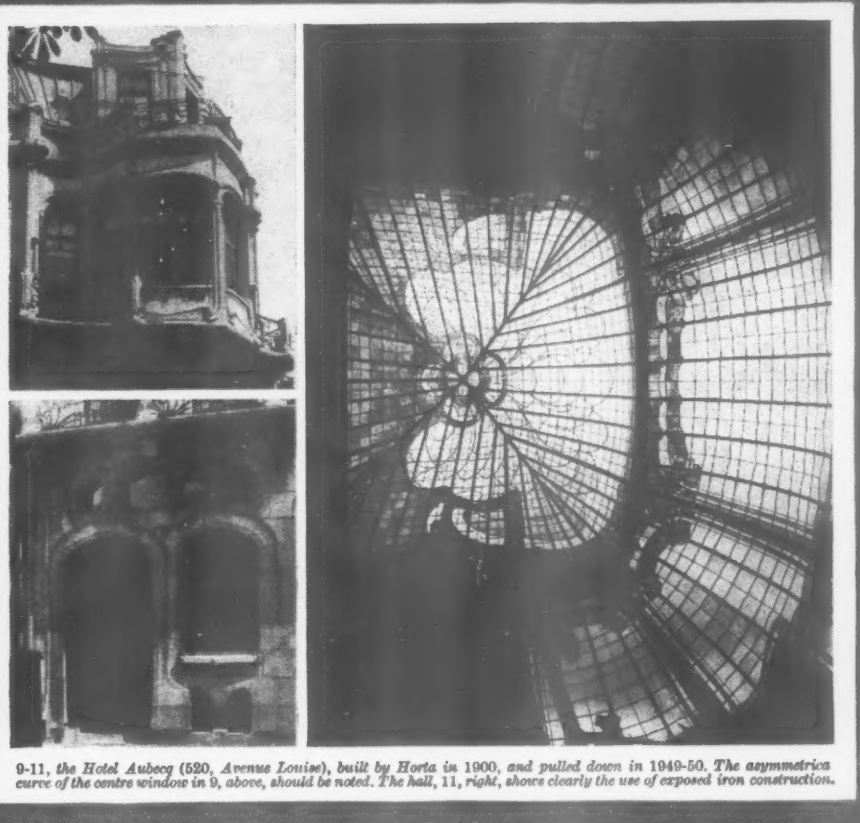
[8] Delhaye, Jean. 'Hommage à mon maître: L'Architecte Baron Victor Horta,' *L'Appartement d'aujourd'hui*, Liége (1946), p. 10.

[9] Extract from a letter mentioned by Baroness Horta.

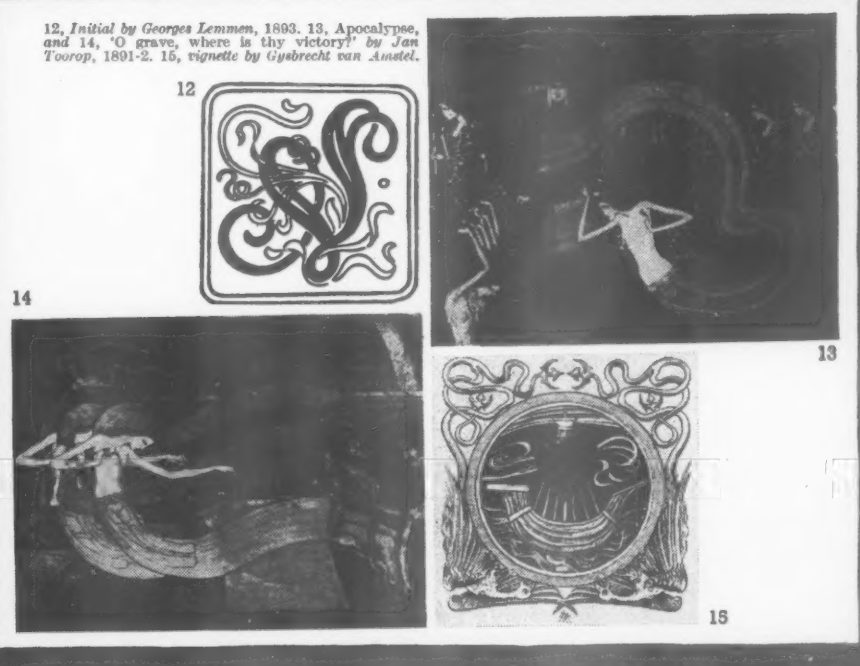
2 and 3, *the first houses Horta designed, in 1885, a group of three in the Rue des Douzes Chambres, Ghent.*

4, *No. 6, Rue de Turin, Brussels, built in 1892-3 (now styled 6, Rue Paul-Emile Janson), the first in the new style. 5, coloured glass panel in the entrance of the house.*

6, *door-numerals for the Hotel Solvay, Avenue Louise, Brussels. 7, the basically Neo-Gothic exterior of the hotel and, 8, the sweepingly Art Nouveau interior, as seen in the dining-room. The electrolier also exhibits the same free linear invention, and a bold and imaginative acceptance of new technological developments paralleling his employment of exposed iron construction.*



9-11, *the Hôtel Aubecq* (520, *Avenue Louise*), *built by Horta in* 1900, *and pulled down in* 1949-50. *The asymmetrical curve of the centre window in* 9, *above, should be noted. The hall,* 11, *right, shows clearly the use of exposed iron construction.*



12, *Initial by Georges Lemmen,* 1893. 13, Apocalypse, *and* 14, 'O grave, where is thy victory?' *by Jan Toorop,* 1891-2. 15, *vignette by Gysbrecht van Amstel.*

As for Horta himself, we know that between 1885 and 1891 he did not build any houses, but that he wrote a certain amount, especially during the years 1888–89.[10]

We also know that he was not satisfied with what he had designed up to that time, and that he therefore returned to studies, paying considerable attention to flowers and plants.[11] Then, in 1892, Horta suddenly emerged as a fully mature architect with a completely new style ready on his drawing board. The first house in the new style was built in 1892–93, in the best residential quarter of Brussels, for Professor Tassel. Its address is now 6, Rue Paul-Emile Janson.[12] But it is better known under the old name 12, Rue de Turin. The plan of this building differs from the traditional Belgian scheme by a less restricted space for the staircase and by the introduction of a circular hall. In the exterior Horta now turned to the neo-Gothic style for inspiration. This is chiefly noticeable in his columns with their bases and capitals, and in the design of the windows. From the Gothicists also Horta may have received the idea of exposing iron construction. It was the Gothicists in Belgium who, after the example of Viollet-le-Duc, had pleaded for the new material. In fact iron had already been used a great deal in neo-Gothic buildings throughout Europe. Even so, however, an iron girder, exhibited naked and unashamed, veritably boasting of its honesty, as may be seen between the first and second floor of Horta's building, had never before appeared in a private house. Horta repeats this motif in several parts of the interior, where he shows himself most impressively as an innovator.

In the door, on entering the house, one notices large areas filled with coloured glass in a decidedly linear pattern. The lines grow upwards like the stalks of flowers, full of life and fertility; yet they are not naturalistic, but stylized. On examining the floor in the circular hall, one is immediately struck by the rhythm of its pattern. But this time one is reminded more of the long, curving and swaying tentacles of an octopus. Again the pattern is abstract, but it did not take long before the style was nicknamed the *paling-stijl* (that is 'eel-style'). In addition to the glass and floor patterns, the walls and the staircase have abstract linear designs. Even the iron construction under the ceiling is subjected to the same fantastic rhythm. Glass, lead, iron, stone and wood all have to submit themselves to the same laws of decoration. 'Because, for a man of his talents, everything was so simple and easy, he created difficulties just for the sake of overcoming them,' said one of his pupils.[13] When Balat saw the house, he was silent and dried a tear in bitter disappointment over his favourite pupil.[14]

Where are the origins of Horta's new style? One's first guess is of

[10] Victor Horta: Musée d'histoire naturelle, *L'Emulation*, Vol. XIII (1888), pp. 22-23-24; *Ibid.*, Excursion en Holland, pp. 121-24; *Ibid.*, Le Théatre Flamand en Bruxelles, pp. 155-59; *Ibid.*, Académie Royale de Belgique, Vol. XIV (1889), p. 16; *Ibid.*, Voyage Hellénique, p. 109.

[11] I owe this information to Baroness Horta in April, 1953.

[12] The house is usually dated 1893, but Octave Mause mentioned in an article, Habitations Modernes, *L'Art Moderne*, Vol. XX (1900), pp. 221-23, that the house was actually under construction in 1892. It is now an *Atelier de haute Couture*; no radical changes have been made to the building, neither outside nor inside, except that the famous mural decorations on the staircase have been painted over, they may, however, still be seen in favourable light.

[13] The architect J. J. Eggericx, to the author April 4, 1953.

[14] Mentioned to the author by Baroness Horta in April, 1953.

course Britain, the Arts and Crafts Movement or the Pre-Raphaelites, especially in their later phases which exhibit such strikingly rhythmical and linear tendencies. In favour of a British origin is the fact that in 1881, Paul Dietrich and Joseph Schwarzenberg had opened Belgium's first *Librairie d'Art* in Brussels (in the immediate vicinity of the *Musées Royaux* and the *Bibliothèque Royale*).[15] The firm maintained active contact with Britain, introduced, for instance, *The Studio* into Belgium, purchased the graphic art of such men as Selwyn Image and Heywood Sumner which they made known to the Belgian public, and also negotiated sales to the *Musée Cinquantenaire*.[16] But these purchases, including a subscription for *The Studio*, refer only to 1893. As for the Pre-Raphaelites, their popularity was by no means universal in Belgium at that time, as may be seen from the following 'aesthetic menu' published in *L'Émulation* in 1893:

> Lis en branches au naturel
> Fleurs de Tournesol à l'oriflamme
> Poissons louches à la dado
> Cuisse de cigogne tout au long
> Tête d'epouvantail à la Botticelli
> Compote de fruit defendu à la Baudelaire fortement sucré.[17]

Neither William Morris nor his movement are mentioned in *L'Emulation* before 1893. It does not therefore seem likely that any direct connection of importance between Britain and Horta existed, when he designed the house for Professor Tassel. The Celtic or Nordic Revival which is a factor in the development of the style of the nineties in England and Scotland[18]—and even more in Scandinavia[19]—does not seem to have had any response in Belgium. On the other hand Horta was ardently interested in France, due both to what he had read and what he had seen, and Viollet-le-Duc's *Dictionnaire raisonnée d'architecture* was his bible.[20] He may also have received impulses from the Pont-Aven, that is the Gauguin, school toward the end of the 1880s. The Synthesism and use of line and rhythm of the group could well have reached him, but what is even more probable is dependence on the Belgian group, *Les XX*, which had been active in Brussels holding meetings and exhibitions, from February 2, 1884. The reaction against Impressionism was clearly demonstrated at the exhibitions, where the accent was on contour, clear colour, line and no depth. There were two English exhibitors at the exhibitions respectively of 1891 and 1892, Walter Crane and Selwyn Image. Herbert Horne and Ford Madox Brown exhibited in 1893.

But the closest approach to Horta's form is in the works shown by such artists as Anton der Kinderen, the painter (1859–1925), Fernand Khnopff, the symbolist (1858–1921), Georges Lemmen (1865–1916), the ambitious neo-Impressionist, Henry van de Velde, also a painter (1863–), Alfred William Finch, the painter and etcher (1854–1930) and, more than any of the others, Jan Toorop (1858–1928). Within this group, such terms as *hermétique*, *synthétisme* and *cloissonisme* were every-day speech, and all these terms refer to clear contours of homogeneous areas. In their dislike of the disintegrating tendencies of Impressionism they were unanimous. The position held by van de Velde within this group and his significance in the subsequent expansion of Art Nouveau has nothing to do with the birth of the style. During the years 1889–93, he exhibited with *Les XX* as a painter. During the last two years, he also exhibited embroideries, 'worked in the technique of the Neo-Impressionists which van de Velde, still a painter, continued to apply to his canvases.'[21] On the other hand, Jan Toorop had produced in 1891 and 1892, such symbolic drawings as *Apocalypse*, *O Grave, where is thy Victory?* and *Symbolic Drawing*, which in rhythm and predominance of line point towards Horta's new style. There is no clear indication that Horta had any direct connection with the *Les XX*, although a keen young architect in Brussels could hardly remain unaware of them. *Les XX* were specially interested in decorative art, and in 1893, gave two whole halls of the exhibition to *Arts Décoratifs*. In 1891 already, pottery had been exhibited, including works by Gauguin. It is highly characteristic that in 1894 van de Velde gave a series of lectures on Camille Lemonnier's slogan: 'L'egalité de tous les arts, décoratifs et autres.'

Horta must have known Gallé and Grasset, Viollet-le-Duc, the general opposition to the copying of period styles, the post-Impressionist emphasis on line, and of course of Toorop. But in the midst of all this varied activity it remains Horta's achievement that he gathered all these tendencies together and applied them to the house as a whole. The pronounced three-dimensional and plastic effect, however, which characterizes some of Horta's façades and the dynamic form language which stamps his ornaments and smaller objects should most probably be seen in relation to the plastic conception of form of the neo-Baroque.

Horta continued throughout the 1890s in his dual task, the creation of a new idiom of form and the search for a logical and clearly expressed architectural solution to constructional problems. The first task had been achieved in the house of 1892–93, the second found a completely satisfactory solution in the *Maison du Peuple* in Brussels, 1896–99, the first façade in Belgium consisting mainly of iron and glass. Specially interesting points in this building are the Gothic details in the interior and the polychrome areas of the façade. The first indicates a persevering source of inspiration, the second a national tendency.

During the 1890s, Horta was responsible for a number of houses in a fully developed Art Nouveau. Before Sigfried Bing opened his showroom in Paris in December, 1895, the plans for the Hotel Solvay in the Avenue Louise and the Hotel Eetveld in the Avenue Palmerston both in Brussels, were ready on Horta's drawing board. The exterior of the Hotel Solvay is again basically neo-Gothic both in construction and detail.[22] The interior, however, is sweepingly Art Nouveau. From the ceiling, with its linear decorations, a cluster of thin parallel tubes is suspended which open out in irregular flowers reminiscent of violets; in the slightly curved walls the same linear rhythm occurs everywhere. Nothing can be changed, nothing can be subtracted or added; no other style could be allowed, a Baroque chair would seem coarse and insulting, and a Louis XVI vase an out-of place flirtation.

Only textiles could be bought in the market to suit such a unified design, and they would in all probability be English. There exists, in fact, an interesting bill from van de Velde who at this time was running a business in decorative arts. This is dated June 17, 1897, and tells us that Horta purchased several yards of 'soie Liberty'[23]—a trivial record but one which reminds us of the reason why Art Nouveau is called by the Italians *Stile Liberty*.

Horta continued in the style of Solvay and the *Maison du Peuple* until after 1900 (see for instance the Hotel Aubecq of 1900 which was pulled down in 1949–50).[24] Then excesses subside, the idiom becomes calmer, surfaces simpler and contours firmer, as may be seen in buildings like 85, Rue Washington, 1906–7, and the *Établissement Wolfers*, Rue d'Arenberg, 1906, both in Brussels. At the same time constructional problems continued to receive satisfactory solutions, as instanced by such buildings as the large store, *Innovation*, in Brussels, 1901, the *Grand Bazar Anspach*, 1903–5, also in Brussels, and the *Magasin à l'Innovation* in Antwerp. Horta's later development to the *Palais des Beaux Arts* in the 1920s, and finally the new *Gare Centrale* in Brussels, still incomplete, reflect some of the main trends in the more recent development of European architecture, but fall outside the scope of this article.

[15] Reported to the author in May, 1953, by the present Director of the firm, Jean Schwarzenberg.

[16] They were wallpapers and chromolithographs, 26 items in all. (No. A.M. 1-14, 6699-6712). The purchases were made in 1893.

[17] G. M. Les Pre-Raphaelite anglais, *L'Emulation*, Vol. XVIII (1893), co. 168.

[18] Thomas Howarth, *Charles Rennie Mackintosh and the Modern Movement*, London, 1952, pp. 229-232.

[19] St. Tschudi Madsen, *Dragestilen*, *Vestlandske Kunstindustrimuseums Arbok*, 1949-50, Bergen (1952), pp. 19-62.

[20] So J. J. Eggerickx told the author in April, 1953.

[21] Octave Maus, *Trente Années de lutte pour l'art*, 1884-1914, Brussels (1926), p. 147.

[22] *Ibid.*, p. 179. Inside also a Gothic feeling makes itself felt very occasionally, *see* for instance the chair with the small leaves. Ill. St. Tschudi Madsen, carsten Hopstock, *Stoler og Stiler*, Oslo, 1955. Fig. 96. Interior details influenced by the style of Louis XV are also found (e.g., the fireplaces and the inkwell).

[23] Archive Comité Horta, 124, Avenue Charles Quint, Brussels.

[24] Photographs in Archives Centrales Iconographique d'Art National, Brussels.

Chronological list of Horta's Early Work. (Where no town is stated, buildings are in Brussels.) *Existing Works:* 1883: *templum in antis* (memorial for Lambeau) Parc Cinquantenaire. 1885: 31, 33, 35, rue des 19 Chambres, Ghent. 1893-3: 6, rue Paul-Emile Janson (interior partly transformed). 1893 (?): Maison Autrique, Chaussée d'Haecht. 1893-4: Maison Frison, 37, rue Lebeau. 1895: Hôtel van Eetveld, 2, av. Louise. 1895-1900: Hôtel Solvay, 224, av. Louise. 1895-6: Hôtel Winssinger, 66, rue des Monnaies. 1896: Laboratoire E. Solvay (transformed). 1896-9: Maison du Peuple, Pl. Emile van der Velde. 1896: house, 157, rue de l'Aqueduc. 1897-9: Hôtel de Mme. van de Velde, av. Palmerston and rue Bodgmant. 1898; 2 houses for himself, 23-25, rue Américaine. 1900: Hôtel Aubecq, 250, av. Louise (pulled down 1949-50). 1901: Innovation, rue Neuve (partly transformed). 1903-5: Musée de Tournai; enlargement of 157, rue de l'Aqueduc; Magazins de Gros Waucquez, rue de Sable. 1906: Hôtel Max Hallet, 306, av. Louise; house, 85, rue Washington; Villa Horta, La Hulpe; Etablissement Hiclet, rue Neuve; Etablissement Wolfers, 11-13, rue d'Arenberg.

Exhibitions designed by Horta: Exposition du Val St. Lambert, 1896; Belgian Pavilion at the Paris Exhibition, 1900; *Exposition du Congo*, Paris, 1900; Belgian Pavilion at the Turin Exhibition, 1902; Belgian Pavilion at the Milan Exhibition, 1906.

Monuments, etc., by Horta: 1884: Memorial at Ghent. 1894: Solvay; Artan, Oostduinkerke. 1895: Huybrechts, Ghent. 1896: Van Beneden; and Ompdraille; Tomb for family Stern. 1899: Remy. 1900: Rivoir (with the sculptor Samuel). 1902: Brahms; Bara, Tournai; tomb for Mme. Lotte, Leuze.

Villas, etc., built by Horta: 1895: school, rue St. Ghislain. 1896: a house for Mlle. Brossel. 1897-9: château for Baron Wangen, Chambley, nr. Nancy. 1897: Villa Timbermann. 1898: Villa Rouge et Rose; Villa Germaine, Wenduyne; Villa des Pavots, Wenduyne; Villa La Joie; Villa Yvonne; Villa Carmouche, la Panne. 1899: château for Carpentier; château for Arden, Wenduyne; *maison de campagne* for Frison, Uccle. 1900: Etablissement Cousin, Chaussée de Charleroi. 1901: Hôtel Dubois; Maison Dopchie; Hôtel Roger; Maison Braecke. 1903: Restaurant Moury; Maison Delgouffre. 1903-5: Maison Sander Pierron. 1903: *Salle de Gymnastique 'Le Peuplier,'* Vilvorde; house for Mlle. Lefebvre; Hôtel Vinck; Villa in Mareleona. 1906: Hôtel Wiener; Innovation, place de Meir, Antwerp. 1906 (?): Grand Bazar Anspach. 1903(?)-05(?): Department Store, Frankfurt.

Furniture: 1894: for M. L'Hoest and for M. Dubois. 1901: for M. Vinck.

These chronological lists could not have been compiled without the help of the *Archives de Comtte Horta* and J. J. Eggerickx.

EDITORS ONLY

DERELICTION

The word Dereliction is commonly associated with duty and its non-fulfilment. And it is certainly justifiable to extend its meaning into a less metaphorical field where it still carries its original overtones: hence the REVIEW *calls the eating up of valuable land by the indiscriminate tipping of waste materials, mining subsidence, unfilled excavations or abandoned workings and their ruins, phenomena which follow in the wake of the heaviest industries wherever they go, DERELICTION. The extent and the threat of this problem is probably little known outside the areas concerned. The County of Lancashire, as last month's article* showed, is unique in England for tackling the problem of reclaiming derelict land on a scale proportionate to the size of the problem. It is probably as little known that MOHLG, by paying half the cost, in approved cases, has recognized the urgency of the task. As a result of that article the Editors have received a letter from U. Aylmer Coates, Lancashire County Planning Officer, which is printed below. An important point from the letter is that the poorest authorities are often the worst afflicted—a fact which is surely the County's (and the whole country's) concern, not merely that of the few unfortunates who live there.*

'Land,' writes Mr. Coates, 'has come to be regarded by many as expendable—the price of civilization's wealth, and an impoverished soil, barren uplands, excavations, subsidence "flashes", spoil heaps and derelict defence works often remain. Planning has the uneasy lot of adjudicating in this clash in the use of the countryside.

'Extractive industries have already produced in parts of Lancashire and elsewhere, a degree of dereliction which can only be effectively tackled if reclamation is accepted as a public liability. When land becomes scarce, reclamation becomes an economic necessity as well as an objective in the restoration of amenities. Our approach to the problem is not one of mere reaction—preservation at all costs. We accept as an unavoidable course the need to find new uses to which some of our land must be put. The test is whether we are sensitive to the different uses and are equipped to select the best balance and are we mindful of spiritual as well as corporeal needs? There is often an overriding demand for the exploitation of capital resources in the land. Thus the countryside is still being changed by the works of Man. Can it be done without forsaking a benevolent heritage?

'The Town and Country Planning Acts, the National Parks Act, the Forestry and Agriculture Acts between them contain powers enabling the reclamation and improvement of land, but they are generally unused and untried. Planning Authorities could themselves do positive work in this connection and our experience in Lancashire is that we can justifiably ask for, and, indeed, have secured, greater co-operation with mineral operators since we ourselves embarked on schemes of reclamation. An ounce of practice is sometimes worth a ton of theory especially when Government shares the cost as it is doing in Lancashire.

'It is usually found that the most intractable problem of dereliction is in districts where local resources are least able to secure a remedy. One of the poorest authorities in Lancashire, from the point of view of rateable value, has over 40 per cent. of its area derelict and a sustained attack on its problems of dereliction would involve an increase of at least 5 shillings on the rates. Lancashire County Council is accepting responsibility in a number of pilot schemes without calling on the District Council for any contribution; thus the county and the country are sharing the cost, which is fair enough since there might have been neither a Lytham St. Annes nor a Chesham Bois if there had been no Ince-in-Makerfield.

'But our work might well become abortive if our efforts are overtaken by new dereliction. For example, the National Coal Board is entitled to extend, without planning consent, any spoil heap in existence on the 1st July, 1948, on the same site. On an appeal arising from a determination, it was decided that fences or hedges did not constitute a boundary to the existing site. Presumably, a stream, canal, railway or road might do so, but in practice this may mean that the deposit of waste material on many hundreds of acres is permitted development and an Order to bring such an operation under control may involve the Local Planning Authority in heavy compensation. Insistence on deposit of spoil, for example in a subsidence "flash" three miles away might cost 8 shillings extra per ton and, assuming a ton of spoil for every four tons of coal, would add as much as 9d. per ton to the cost of producing the coal. Great efforts have recently been made to save land by increasing the densities of housing and this has produced more compact and homely layouts, but a rough calculation shows that in 20 years time something like 10,000 acres of land will be used in Lancashire by mineral operators, for tipping purposes or by local authorities for the deposit of household and other refuse.

'Any reclamation policy must be not only curative but also preventative. Whilst efforts should be made to equate the cost of restoration with the creation of new land values and the reducing of subsidies to a minimum, the enhancement of values in the neighbourhood created by the improvement of amenities should not be overlooked. In new mineral operations, restoration should be planned with workings as a single process. In Lancashire, we have acquired some old and derelict areas by agreement under Section 40 of the 1947 Act. The grants available from Government for acquisition and clearing can include grading, levelling and removal of waste material. Subsequent cultivation is not subject to grant as it is not "implicit" in the term "acquisition and clearing." Our tree planting operations on spoil heaps have been done under Section 89 of the National Parks Act which can be used outside Park areas. In such cases, grants are not available under that Act, but the Forestry Commission have assisted in a few instances by their grant of £15 per acre (about one quarter of the cost) which suggests that the work is of long term economic value.

'There are some accompanying benefits in reclaiming derelict land adjoining built-up areas: it reduces the sprawl of development as well as conserves adjoining agricultural land. Thus, the lengths of streets and public services such as bus routes, sewerage, water and electricity may be shortened and cheapened and the number of branch facilities, such as libraries, schools and health centres, may be reduced.

'The cases tackled so far are the relatively simple and inexpensive ones where there is some reasonably assured demand for the land, e.g., housing, schools, playing fields, agriculture or industry. Many derelict excavations cannot be reclaimed without filling from outside sources and tipping must, therefore, be employed as a positive reclamation instrument. Sites suitable for tipping have already acquired a scarcity value roughly proportional to their proximity to industrial towns. Mineral operators, when they have finished extraction, are generally free to backfill without planning consent. In remote sites, conditional planning consents imposed on mineral operators requiring them to backfill may be an expensive liability, but near industrial

* Kenneth Browne "Dereliction" (A.R. November, 1955): one of a series which will be appearing, devoted to the same problem in various parts of the country.

areas they can charge heavily for the right to use their excavations. Thus, for example, the refusal of planning consent for tipping by a steel corporation on good agricultural land may put a high monopoly value on nearby excavated areas.

'The acquisition of worked-out mineral sites and subsidence "flashes" and their management as regional tipping projects should, in suitable cases, be an integral part of any reclamation policy. Co-ordinated regional tipping projects would ensure that waste material would be directed to reclamation objectives.

'The reclamation of derelict military sites which have been written off by the Government is now proposed as a planning responsibility and if this is accepted, government grants should be available for their restoration in the same way as for the recovery of any other derelict land.

'The tree preservation powers of the 1947 Act are valuable in controlling felling operations which may be made conditional on replanting, but the role of a planning authority towards the landscape could, with advantage, be more positive. Short of widespread acquisition, the planning authorities can still do much by persuasion. If the land has become fragmented into separate ownerships, this can be a long and painstaking process, but the results are usually worthwhile.

'In many cases, I feel—as THE ARCHITECTURAL REVIEW does—that there is no need to flatten every spoil heap, the cost of which would in many cases be prohibitive. Properly clothed and judiciously planted, they can be attractive in what might otherwise be a dull, flat landscape. They can also provide effective wind-breaks and many of the cloughs and steep-sided valleys should also be wooded to arrest erosion.

'Thousands of acres of upland areas—once forest—are now almost derelict by erosion or sterilized by water authorities. They await afforestation. Some of them in Lancashire are in atmospherically-polluted areas and perhaps for this reason have not so far been planted, but when clean air becomes obligatory much can be done to humanize many bare tracts of land. The Mersey River Board have initiated a pilot scheme for the afforestation of 70 acres of watershed consisting of poor land reverting to heath. This will provide information about the effects of afforestation in controlling the rate of water "run-off". Large-scale planting in the Irwell catchment area may produce improvement to the problem of recurring floods in the valley towns.

'A treasure is never more valuable than when the danger of its loss is imminent. There is, perhaps, a natural tendency to be passive in these things rather than to exert our efforts to improve. It needs a polemic such as an "Outrage" to stir the public conscience and it is still necessary for a Minister of the Crown to write the "Green Belt" Circular.'

Mr. Coates's letter shows that it is possible, in spite of the jungle of existing acts, for planning authorities to find powers to reclaim land; and such positive action is the only justification of their existence, which mere prevention is not. Planners are advised by a wide range of specialists—architects, town planners, engineers and scientists—but how often is the result more than a widening and deepening of the ocean of statistics?

Hugh Casson

HISTORY

ARCHITECTURAL FREE-THINKING

At one level, the modern movement was invented about 1905 *as a conscious reaction to nineteenth century eclecticism. At another level—that of the functional tradition—it has been there all the time. Sometimes the functional tradition gives the same result as the modern movement and makes the accepted chronology look a bit arbitrary at first glance.* In 1942, Professor Pevsner wrote an article called 'Nine Swallows—No Summer,'* describing nine buildings put up in Great Britain between 1900 and 1914 which were 'modern' before their time. Most of these were factories; the best, and almost the earliest, was H. B. Cresswell's Queensferry factory of 1901, very near the spirit of Behrens's pioneer turbine factory (of 1909), and, as Professor Pevsner remarked, of equal historical importance. Here is a tenth swallow, which resembles the turbine factory in letter as well as in spirit. It is Chamberlin's wholesale clothing factory, Botolph Street, Norwich; its date is 1903, a year which saw Behrens still building country houses derived from Voysey.

The architect was A. F. Scott, of Norwich, and what is known of his life and his buildings gives something like a coherent portrait of one of those free-thinkers who produced modern buildings without knowing they had done so. Typically, it is no help towards understanding any of the other architects, for there was no single approach, no style and no school, only a handful of unconnected individuals.

Typically also, Scott's character is more relevant than the rest of his building work. He was essentially a Victorian individualist born too late (1854) to find a building style to match his originality, as S. S. Teulon or E. B. Lamb managed to do. A list of his attributes reads like caricature—he was vegetarian and teetotal, and hence would not accept commissions from breweries: he possessed the first bicycle in Norwich to have pneumatic tyres, and used it to cycle between commissions. As surveyor of Cromer he invented a new system of road surfacing, which, characteristically, he didn't bother to patent: and he maintained a native missionary in China at his own expense. His photographs show a long-bearded patriarch, stern and incorruptible.

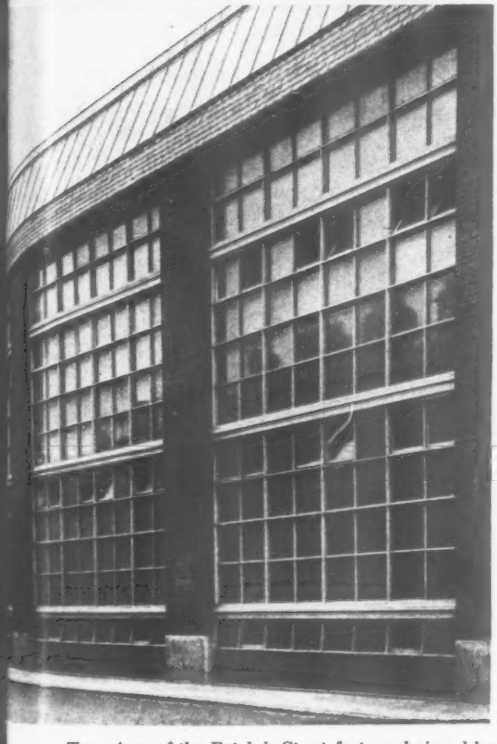
All this is High Victorian (to borrow a term from art to interpret life, for a change) and possibly could have happened only in a city like Norwich, which throughout the nineteenth century was something like forty years conservative, and which had always produced individuals, not types. After this it is disappointing to find most of Scott's buildings reflecting the prevailing architectural climate in Norwich—stale Gothic and debased Corn Exchange Italianate. His Scott Memorial Methodist church of 1901 (built by the Scott family in memory of their father) and the church hall to Queens Road Methodist church, 1887, are quite typical of those two enervating styles. As the fashion changed, so did his work, and the public lavatory he built under the sea-wall at Cromer is Edwardian Baroque; an oddly spirited and taut design, encaustic tiled with terra-cotta ornament, and two large semicircular windows. The inside is quite well planned, but of necessity one can only appreciate one-half of it.

To return to the problem of the factory which these buildings confuse rather than explain; the design seems to have been purely a commonsense reaction to the functional problem. The eloquent roofline, for example, which is an eyecatcher for the whole street, is in fact the first of a series of north-lights, the rest of which are hidden. Perhaps his attitude to it emerges best obliquely—in 1910 he built a factory in Norwich entirely of reinforced concrete, with the resulting grid entirely glazed, yet, wishing to add a little 'architecture,' he roughcast the elevations. This, like the Chamberlin factory, was the first in the area, and one of the first in the country, yet any intimation that he was helping to create a new architecture seems to have been absent from his mind.

In fact, of course, he wasn't: this building is as firmly in the functional tradition as the Cobb at Lyme Regis. Twentieth century Norwich started on its weary Neo-Georgian shuffle (which has by no means finished) without another thought for the possibilities inherent in the Botolph Street factory. The man today in Norwich who wants to build a bungalow or a small factory extension, or any other of the

* AR, May, 1942, page 130.

1



2

Two views of the Botolph Street factory designed by A. F. Scott in 1903. 1, *from the east.* 2, *a close-up showing the assured detailing of the basement lighting.*

things often done without benefit of architect, finds the language of modules and cross walls and floor heating far above his head: what he needs is someone to simplify the technical advances into rules of thumb in the cause of getting them across to people who wouldn't otherwise understand them. That is just what these buildings of A. F. Scott are doing, accepting the latest advances and translating them into terms that can be applied to run-of-the-mill building: adding extra chapters to the handbook of the functional tradition.

Ian Nairn

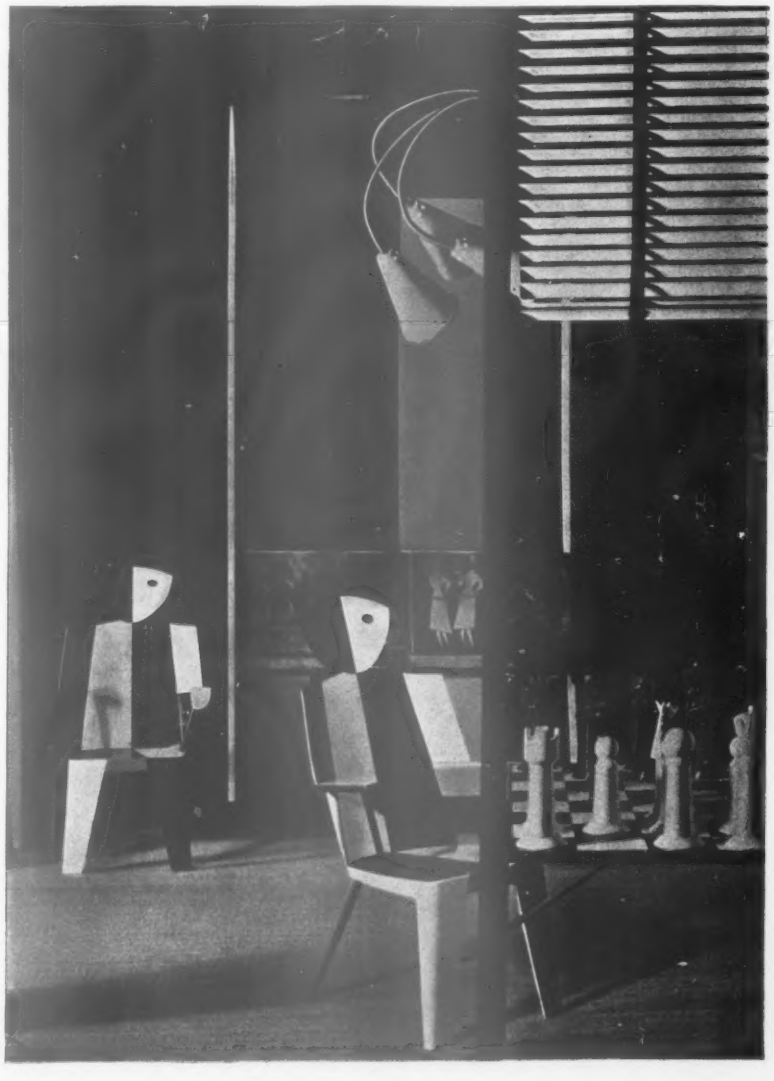
WORLD

STAND AT UTRECHT TEXTILE FAIR

Humour is not the most reliable servant the exhibition designer can command, but a truly personal brand of wit, disciplined by a firm sense of exhibition architecture's ultimate aim—to sell an idea or a product, not a designer—can occasionally create a stand where jokes concentrate attention, rather than dissipate it. Lewitt-Him's display for International Rayon Trading Company at the Utrecht Textile Fair of 1953, 1 and 2, remains a case in point, and still bears scrutiny as an original contribution to exhibition design. Any client going to the Lewitt-Him office would know that he was dealing with a celebrated team of humorous designers, and International Rayon boldly gave them

1

an unrestricted hand in the design, apart from specifying minimal functional requirements. The result was a design which harnesses a characteristically personal colour sense and wit to the twin tasks of catching attention and—having caught it—directing it to the rayon thread which is the client's main product. The epitome of this catching and direction of attention



2

is the anthropomorphic chair—a functional folly, an eye-catcher with an eye of its own, capable of staring back at the visitor, or encouraging him to stare at the company's product, for the chess-men on the table to which the nearer chair-man attends are, by a further double-take, spools of rayon thread.

P.R.B.

WALLSCAPE

DIAPERS

Though diapering and feigned rustication have hitherto been treated as relics of an extinct or provincial vernacular tradition of illusionistic painting on walls, both devices have utility for the contemporary architect which should not be overlooked.* Beyond their obvious use as another alternative treatment of flat surfaces, they can also be made to solve visual problems which might not otherwise be soluble without distorting the functional or formal qualities of a building, and an excellent example of their use in this way is to be seen in a small block of flats in Burghley Road, Kentish Town, designed by Davies and Arnold. The functional basis of the problem lay in the section of the block, which has the flats on either side of the staircase out of phase by half a storey. This permits a most economical use of the stairs, with a flat opening off every half-landing, but leaves the non alignment of the window lines to be taken up in some way on the elevation—a difficulty which is not simplified at all by the staggered staircase windows.

As the picture below shows, a bold diaper pattern, whose module is the square of the frames of the staircase windows, not only serves to 'lose' those windows in the all-over pattern, and thus remove the visual discomfort of their staggered arrangement, but also provides a vertical strip of surface which is in complete contrast to the walls on either side, and thus separates the two halves of the building visually. In addition, the very nature of the pattern, with its strong diagonal emphasis, discourages the eye from travelling horizontally from one half of the façade to the other, and thus avoids any sense of visual strain at the change of levels.

C. Forshoe

* Architectural Review, July and October, 1943; January, 1948, and October, 1951.

EXHIBITIONS

The Etty exhibition at the Arts Council Gallery was one of those thoroughly English occasions which give us the opportunity to congratulate ourselves on being 'nicer' than foreigners, for Etty's nudes probably represent the best results obtainable from the difficult art of staring with averted eyes. According to the catalogue, the exhibition was a tribute to the work of the greatest painter of the nude that we have so far produced, but this was only a euphemistic way of saying that we haven't had any great painters of the nude. Etty didn't have enough imagination to be able to transform the naked model into a classical goddess or a romantic *femme fatale*, and seems to have been too shy to be vividly literal, and the result, charming enough in its way, was a solemn charade of tense, pink girls in plastercast poses. The delectably prim figure in the uncompleted painting referred to in the catalogue as 'Seated Female Nude,' 1, is less affected by his deplorable habit of pointing up the

1

forms with an edge of black shadow than some others, but even here it causes the left arm and breast to look like a 'component' that has been attached to the figure by a nail. The catalogue note about this picture was far from adequate. There was no mention of the man and woman in the background or of the curious horned form on the left or of the fact that the foreground figure wears a wedding ring or even that the picture is unfinished. All we are told is that it was probably painted between 1840 and 1845, and that when it was reproduced in a book published at Leigh-on-Sea in 1943, it was called 'Contemplation.' It's a nice thought, but the figures in the background appear to think that the young lady ought not to be contemplating whatever it is that she *is* contemplating.

The Gauguins at the Tate Gallery looked sadly worn and faded, as if they had been exhausted by constant demands on their vitality. They were well chosen and accompanied by an admirable catalogue, but only half a dozen or so retain some shred of the potency that made them the prize stud bulls of twentieth-century primitivism. Two of them—'Loss of Virginity' and 'The Moon and the Earth,' 2, are badly painted and naïvely composed, but they are clumsily successful attempts to turn inscrutable experience into pictorial sensation. The first of these two pictures depicts an impassive recumbent nude at the verge of a red field. She is fondling a fox, which symbolizes physical desire, and there is a Breton wedding procession in the background. But one doesn't need to know anything about symbolism to understand the picture. It is enough that Gauguin has not given the girl any excuse for being naked and has placed her in the proximity of an unnaturally red field. Apparently the picture is sometimes erroneously called 'Spring's Awakening,' which is a conventionalized acknowledgement of the theme. Again, although 'The Moon and the Earth' is an interpretation of a Tahitian legend, one doesn't need to know it. The theme of sexual desire is explicit in the forms, and an agitated pool of red water clinches the matter. Red has been used throughout the ages as a symbol of passion but Gauguin gave it the directness of a mating call.

2

3

If he were alive to-day, he would recognize that Germaine Richier's sculpture owed him something, but he might be a little surprised to discover that she has so thoroughly cultivated her primeval instincts that she seeks the roots of being in the primeval ooze, 3. A large seated figure in her exhibition at the Hanover Gallery is a triumph of eclecticism and sophisticated primitivism: she uses the art of Picasso, Giacometti and Marini to compound a figure with a fat body and stick-like legs and two handles where the head ought to be, and she manages to convey the impression that it hankers after human sacrifice. It is a kind of cult image, dedicated to the breaking of natural ties, and no vestige of normal human feeling remains.

The art of John Bratby is no less fearsome in its way, and his second exhibition at the Beaux Arts Gallery may well be a sustained 'raspberry,' directed against nothing in particular and emitted for the sheer pleasure of being rude and crude. Oddly enough, his paintings of lavatories, 4, do not confirm one's suspicions. They seem to have been painted in a spirit of homage to Van Gogh, and certainly express no contempt for the human condition. I think that, to put it timidly, the lavatories and some of the kitchen interiors may in time acquire the proper look of masterpieces, and that if they were temporarily glazed and decently framed the process could be hastened.

4

If the most interesting of recent I.C.A. shows was the one devoted to young sculptors, it was because Ralph Brown's 'Girl with Wheel,' 5, who looks as if she has escaped from one of Jack Smith's paintings into a somewhat warmer atmosphere, laughed the rest of a ludicrously extremist show out of countenance. It is the work of a sculptor who can give a full account of the human figure in movement, and it looks as if he will be able to command our attention without pulling faces at us.

5

Michael Ayrton's retrospective exhibition at Whitechapel Art Gallery suggests that he is the modern equivalent of the Victorian Narrative Painters. The exhibition is an impressive display of work done, but his talent and intelligence should have taken him a good deal further. Under the early influence of Tchelitchew his skilful draughtsmanship was switched to a 'Renaissance' siding, and has been off the main track ever since. His attempt to render the 'distortions' of modern pictorial form literally and to treat the anxieties of the time anecdotally lands him with figures and situations as neurotically preposterous as the 'historical' incidents in the pictures of William Shakespeare Burton and Alma Tadema. The drawing called 'Approaching Thunder,' 6, in which a group of 'mutants' express a sub-human response

6

to a natural phenomenon, is, unfortunately, a typical example of his compositions with figures. **Robert Melville**

LETTERING

MINISCULE

Lower case, little letters or miniscule—what shall we call them? For undoubtedly they are important in public lettering, not for monumental purposes, but as a possible and suitable alternative for a multitude of ephemeral and unpretentious uses.

There are three characteristics that I would wish to note about little letters. The first is this one of unpretentiousness, one that we need so badly if our belettered streets are ever to be a pleasure, and I would suggest to the advertiser that this does not at all imply inconspicuousness. I give three examples: 1, the Dublin bus stop notice is charming; it does not perhaps suggest to one the completely reliable efficiency implied in the London Transport notices, something more friendly. I am enchanted by that little word set so well in its bordered rectangle, and so simply on its post. 2, from Wigmore Street has unfortunately been carelessly painted-in but the incised letters have a very pleasant rhythm. 3, seen in Nice, is an example of

3

the effectiveness of the unpretentious, to convey recherché refinement.

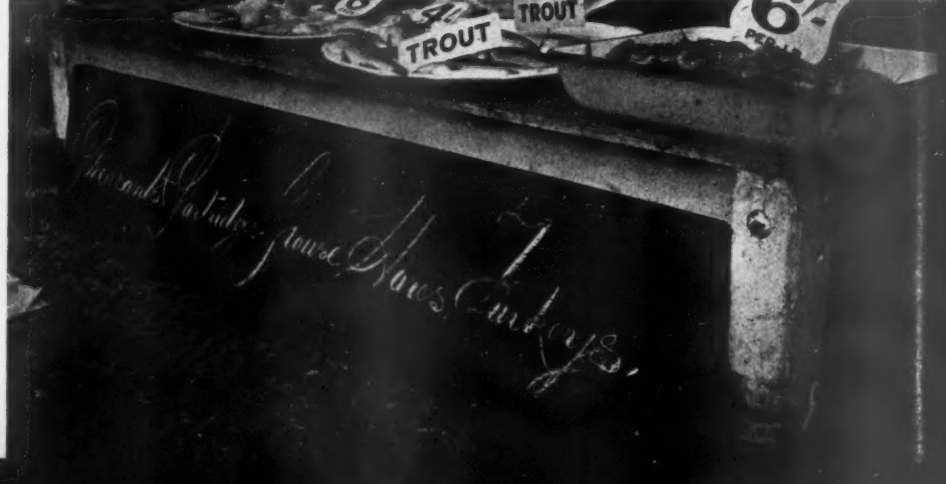
A second characteristic is the adaptability of little letters, particularly in a cursive form, to various sorts of materials.

lettering: miniscule. *Five examples of the use of lower case letters* *1, in Dublin; 2, Wigmore Street, London, W.1; 4, on a shop front at Cheltenham; 5, a fishmonger in the King's Road.*

1

2

4



5

There is the wooden, round-sectioned, flourished letter, 4, of which one sees many examples, of varying quality, this is a particularly rich one from Cheltenham, designed with verve and so much pleasure in the multiplied curves. The same *copper-plate* letter is fascinatingly controlled and proper in its continuous lead line, inlaid in marble, on a fishmonger's shop in Bath, 6. It is cheering to notice how this trade at least has preserved a tradition. For instance, the fishmonger's blackboard, of which 5 is a typical instance, is almost always a nice piece of lettering. A modern version of the flourished hand is painted on glass at Waterloo Air Terminal, 7; the thin cursive has a particular elegance and informality. Aquascutum, 8, shows the modern free-standing italic letter, and abroad one sees particularly successful metal and neon letters. La Maison Rouge, 10, is an example of a metal ribbon set vertical to the wall at Nice. Bar Marseillais, 9, at Vence, on the other hand, is flat strip metal. 11, is an example of another typical modern French letter, of bent metal tubing, a far more sophisticated and interesting type of cursive than one would see on the corresponding provincial cheap restaurant in England.

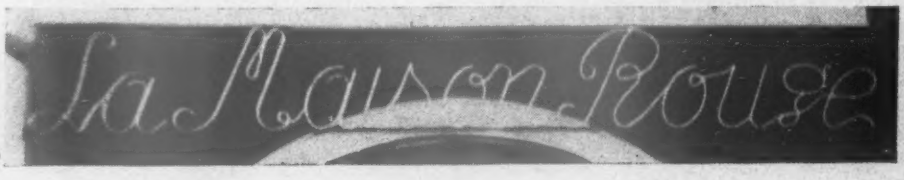
6

These examples immediately suggest the third characteristic of the miniscule and its greatest interest. Unlike any capital form of letter it is fluid. There can be variation not only of proportion but in the actual form of the letter. We have lost the Gothic letter. To my mind it is a great loss for it is a magnificent letter, both formal textura and Gothic cursive (not German Fraktur or 19th Century commercial inventions), but it has become hopelessly involved with Olde Worlde and ecclesiology and Gothic revival and because of these associations is unusable in England today. For the extension of our repertory and the enlargement of the raw material of lettering as a creative art the little letter is therefore a great asset. In itself it has more variety than the capital, if only in virtue of its descenders and ascenders, and the inevitable contrast with capital initials; it can so easily be a nervous line and a living pattern.

7

8

9



10

11

12

13

14

But how shall we judge that one pattern is better than another? Not by the type of lettering, for 4 and 6 are good, whereas the same model in 12, is utterly dreary. Not by finish in design and execution for 13, from Cheltenham, has an irregularity that is amateurish and yet I find it more

pleasing than the perfect control of 14, by Reynolds Stone. One cannot, I think, dismiss all the factors of which one is immediately conscious, for example, that 12 is a vulgar, and 14 an academic, and 6 a traditional craftsman's way of writing, for behind that is the writer's intention to make something showy, or in good taste, or in the proper way. But beyond that is the question as to whether or in what degree the writer was an artist. And here is surely a field where it is easy to see that lettering can be the same sort of thing as drawing and sculpture, and must be judged in the same sort of way.

Nicolette Gray

LANDSCAPE

THE TEMPLE OF HEAVEN

The Temple of Heaven is a group of buildings standing in a park in the southern half of the outer city of Peking. It lies to the east of the main north-south boulevard upon the axis of which is threaded the Imperial City, but though thus eccentrically placed, the principal buildings, and the courtyards, gatehouses and ramps by which they are connected, are given the same formal and axial layout used everywhere in China for ceremonial structures.

The buildings vary in age and distinction. Some of them are said to be 500 years old—others have been rebuilt as recently as 50 years ago. All of them have been carefully restored and redecorated so that today they stand upon their blindingly white marble terraces, glittering in the sun like freshly unwrapped toys. Handsome as they are in their metallic and rather menacing livery of gold and scarlet, green and blue, they are not all perhaps—in memory at least—as individually remarkable as many other of the palaces and pavilions of Peking. But the handling of the approaches and ramps, the subtle relationship of buildings to courtyards, and above all the contrasts of enclosure and release, of suspense and relief, of movement and repose—everything in fact that AR readers have come to know as 'Townscape'—this surely cannot be matched anywhere in China.

For the visitor indeed this visual adventure can be said to begin a mile or so away, when he passes through the gate of the Inner Wall, and southwards along the main central boulevard of Peking. This is lined on both sides with shops and stalls, and is as crowded and coloured and clamorous as Oxford Street on Xmas Eve. A quick turn to the left, through a formal gateway set in a high wall, and a sudden silence is clamped over the ears like a huge

1

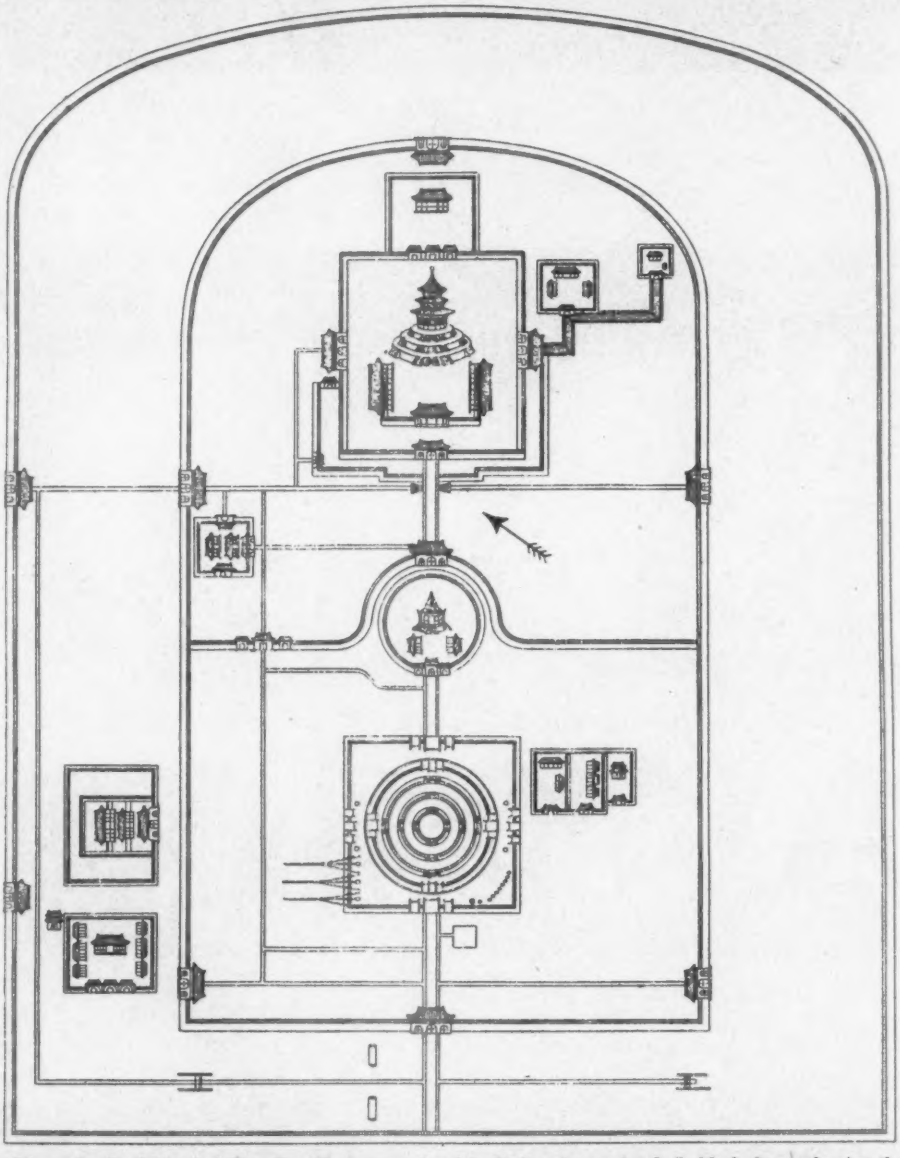
felt hat. The road running straight ahead is soft and sandy underfoot. On each side are groves of cypresses, ancient and black, in the depths of which, revealed only by wisps of blue charcoal smoke, can be discerned a deserted encampment of army tents.

At the far end of the avenue—perhaps five or ten minutes' walk in length—a stone-paved ramp rises sharply into the sky, 1. What lies beyond? A garden? Buildings? Could it be the sea? . . . The eye is given no hint, but curiosity quickens the feet.

The summit is reached, the first secret is revealed. The visitor finds himself standing on a giant stone causeway that runs at tree-top level to his left and right. Immediately before him a small, almost insignificant, viewing platform—placed for some ceremony—overlooks another grove of cypresses and across to the eastern plains of Peking. Behind him stretches the park through which he has just walked. From the midst of it a bugle sounds

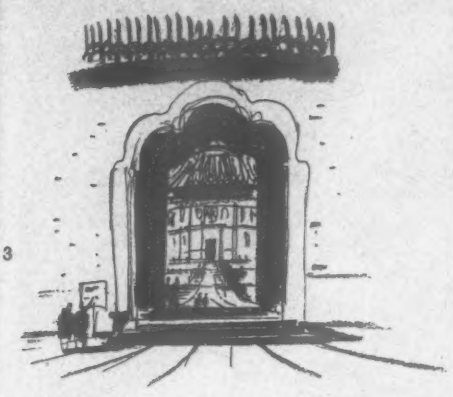
2

wistfully. Clearly there is somebody in those tents after all. The causeway, grey ruled and patterned, stretches for some-



Plan, after Ta Ts'ing hui Tien Tu, *Ch.* 1, *reproduced in* Universismus, *by J. J. M. de Groot, showing the progression described here. The central causeway is indicated by the arrow, and is approached from the left hand side: the route, is then into the square courtyard at the top of the plan, back again and past the central circular courtyard to the high altar below.*

thing like 800 yards in each direction, and is halted at each end by tiled gatehouses of identical design, 2. Turning left first, and looking down upon the cypresses as he walks, he reaches the first gatehouse, 3, mounts a few steps into a narrow twilight and then, suddenly out again into a courtyard filled to its brim with golden heat. Centrally before him rears up a great


3

circular temple, blood-red walls crowned with three tiers of blue tiles, the whole structure mounted on a series of white terraces ramped and balustraded, 4. To left and right stand subsidiary pavilions now used as museums, where ancient musical instruments and the staffs and garlands

4

of dancers lie still and silent in the dusty gloom. The quiet is absolute—only the faintest crepitation of tiny sounds, the movement of a branch, the shuffle of a slippered foot, the creak of a closing door, disturbs the summer air.

There is no escape from here, only retreat. Back then along the causeway and again through the sudden darkness of the archway and this time behold not a square, but a circular courtyard, and turned moreover inside out. To left and right a

5

high tile-capped wall curves away apparently unpierced. Again comes the temptation to walk faster. Even the little tea-garden, 6, set temptingly under the cypresses fails to divert curiosity now so urgently aroused. The tension is spun out to the very end, for the entrance to this circular enclosure is placed exactly at the

6

farthest possible point, 5. Within the protecting walls stands another temple, 6; outside them and to the south again stands naked to the sky the climax of the whole ceremonial sequence, the Altar of Heaven itself, 7, . . . a vast 3-tiered marble terrace, stepped and balustraded, every concentric stone placed and fitted with exquisite precision. From the summit of the topmost terrace—the marble floor of which drums to the feet like a stretched membrane—

7

the whole secret sequence of the Temple of Heaven lies betrayed to the eye . . . unfolding, leaf by leaf, as it were—to the north and the distant golden roofs of the Imperial City.

But if curiosity has been momentarily conquered, the appetite of the eye has not, nor will it ever be; and it is for this reason that, of all places in Peking, it is always to the Temple of Heaven to which the traveller will return again and again.

Hugh Casson

BOOKS

ORGANIC PROPHECY

THE FUTURE OF ARCHITECTURE. *By Frank Lloyd Wright. Architectural Press. 50s.*

The lectures and essays collected under this title cover the whole range of Wright's thought from his interpretation of the history of architecture to the ideas underlying such works as the early Prairie Houses and the Imperial Hotel at Tokio. They do, in fact, claim to establish the principles of a universal architecture, and it is in the light of this claim that they should be read.

The importance of Wright's architecture to the modern movement lay in the free plan generated according to internal necessity and the new concept of space that this implied. In the work of de Stijl, the Bauhaus and Mies van der Rohe, this new freedom was modified by ideas derived from the use of concrete and steel, from the Cubists and from the classical tradition. These factors to some extent supplied the dynamic of the new architecture but in Wright's case the dynamic is supplied from another source—a concept of man in direct relation to nature. Whereas in the European modern movement functions of an inert and mechanistic kind are accepted as form determinants, Wright conceives function purely in terms of life. In expressing functions, he seeks to unearth the 'anima' in nature and his buildings are thought of as materialisations of the natural process.

The fallacy of this theory lies in its equation of the architectural with the natural process, and in fact Wright does not simply draw out the forms inherent in materials and structure or in the functional grouping of his spaces. He imposes on materials and spaces forms which dramatise certain natural formations and create a sense of mystery, and on his plans an organization which is crystalline rather than organic. In seeking to recreate the *Gestalt* of nature, where every process contributes to a final and characteristic form, he succeeds only in producing an additive system which by its very nature is incapable of achieving finality. He rejects the classical tradition because it imposes rigid forms upon nature but overlooks the fact that it is precisely because the classical tradition sought to express the order of nature by analogy and not by imitation, that it was capable of an order proper to itself and was therefore truly organic in its own right.

The force of the organic theory lies not in its power to achieve form but as an initiating principle—the living force, which alone can prevent a formal grammar from becoming academic. Wright in fact uses it in this sense, but in order to achieve formal legibility in his buildings he has to impose on them his own anti-classical formalism—a formalism every bit as unnatural as that of classicism itself.

His theory of the organic, his anti-classicism, his dislike of the city, can perhaps be traced to the American pioneer spirit which had to create a new tradition and a new myth in the face of an overpowering natural environment. His first Prairie Houses, whose inception he describes in some of the most valuable passages of the book, have the impact of natural forces and the principles underlying them are basic enough to stand transportation to entirely different conditions. But when he discusses the city, his attitude seems romantic and escapist.

While Le Corbusier injects light and form into the city, Wright seeks to take the emotional aspects of the city into the country—to strip the city bare of life and reduce it to a machine for producing the means to 'the good life' to be enjoyed in rural surroundings. He accepts the products of the industrial age, replacing the contiguous community by the television set and the automobile, but refuses to face up to the modern commercial city without which these products could not exist. His rural heaven depends on a metropolitan hell and man the producer only becomes human after he has commuted to his acre. But to say this is merely to say that Wright's ideas were formed a generation before those of the modern movement. The Chicago school was for him only an inadequate temporizing with conditions which were totally bad, and it was perhaps impossible for him to foresee the significance of a Sullivan for the architects of the modern movement who had to forge a new architecture out of a living tradition, and for whom the modern city and the machine were as much forces to be placated as was the prairie for Wright.

We must therefore see Wright in his

fin-de-siècle context, with unacknowledged formal and theoretical ties with the 'art nouveau.' But to the extent to which he is a solitary prophet with a message from the desert far more radical than that of the Arts and Crafts movement and a formal language which, in spite of its 'literary' and 'impressionistic' qualities, has so few stylistic derivations, he is still a living force—a true original. And it is perhaps less to the conscience of the modern movement that this great moralist speaks than to its lyrical impulse, often inhibited by an arbitrary rationale.

Wright's ideas have had their greatest superficial influence on the architecture of the American West, but the publication of this book gives us an opportunity to reassess their importance for the modern movement as a whole.

Alan Colquhoun

CAMERAS IN THE OLD SOUTH

SHADOWS IN SILVER: A RECORD OF VIRGINIA 1850-1900. *By A. Lawrence Kocher and Howard Dearstyne. Charles Scribner's Sons.* $7.50.

The Old South, they call it. But time plays queer tricks in America. There are little towns in Texas which one feels to be immemorially old, though in fact they were founded in the 1840's or later. In Virginia it is the War Between the States—for in Virginia you must never, never call it the Civil War—from which time *seems* to start: the bearded heroes of those years seem infinitely stranger and more remote than the English planters of colonial days or the energetic and cultured Americans of the early Republic. The buildings of that age often seem older than colonial buildings too. But then, such is the zeal for restoration where colonial buildings are concerned, they often are older.

Most of the photographs that Lawrence Kocher and Howard Dearstyne have assembled in this attractive volume were taken in Virginia between the War and the opening of the twentieth century. Nearly all are the work of two photographers, George S. Cook and his son Huestis. The elder Cook was a Connecticut Yankee who began his photographic career as a daguerrotypist in New Orleans in the 'forties, practised in New York and Philadelphia and for thirty years in Charleston, and set up in Richmond in 1880. Huestis, who was born in 1868 and died in 1951, took advantage of the invention of the dry plate about the time of his father's final move to become one of America's leading field photographers. Messrs. Kocher and Dearstyne (architects both, Lawrence Kocher being a former editor of the *Architectural Record*) salvaged the vast collection of Cook negatives from the attic of a Richmond house, and had the advantage of Huestis's collaboration in the tasks of selection and identification during the last four years of his life. The text and captions that they have written to accompany the photographs are lively, informative and warm-hearted.

Perhaps neither Cook is to be ranked among the very greatest of the photographers of the nineteenth century. Nevertheless, both took many memorable photographs, and the cumulative effect of this selection of their work is impressive. As a record of a Virginia that has disappeared it is valuable and fascinating. Huestis Cook was the first photographer to be admitted into many of the old plantation houses, arriving by water as often as not; so here is Rosewell, still roofed, before the turkey vultures took it over, and here is the outside kitchen of Tuckahoe with a meal actually on its way to the house, and here is Westover with a party of Colonels and Majors and their womenfolk on the steps. Then here is a section of views of towns, with Richmond still nobly dominated by Jefferson's Capitol, and the streets of Yorktown, through which today the Fords and Chevrolets and Pontiacs endlessly roll, comfortably growing grass. And one of taverns—a class of building that has been denatured in the half-dry Virginia of today—and another of country stores. And then the human architecture, no less subject to 'period' than any other—the portraits of the known and the unknown, the idle and the industrious, the white and the black.

'A Virginia that has disappeared' did I say? Well, there is still some of it left, though you have to be un-American enough to leave the main roads to find it. In some parts of the state you can still drive for miles along dirt roads, spreading the dust on high walls of Indian corn. There are still some plantation houses, such as Shirley on the James below Richmond and the Jeffersonian Bremo above, where the sense of the past is strong. There is a shop in Richmond whose fascia board still announces 'Dry Goods and Notions.' Yes, the Old South is still sometimes old.

Marcus Whiffen

The horseshoe-shaped staircase of Berry Hill, Halifax County, Virginia, the home of a rich slave owner, James Coles Bruce. The exterior of the house was severely classical, the portico being copied from the Temple of Theseus.

Shorter Notices

DIE MICHAELISKIRCHE IN HILDESHEIM. *By Hartwig Beseler and Hans Roggenkamp. Gebr. Mann, Berlin,* 1954. 50 *DM.*

St. Michael's at Hildesheim is the most important German building of the early eleventh century. It was badly damaged by an air attack a few days before the end of the war. Dr. Beseler and Herr Roggenkamp present a full set of illustrations, measured drawings of the state of the church before and after bombing, and two separate texts, both detailed and learned. Dr. Beseler discusses the history of the building and its present state and reaches convincing new results on plan and elevation of the period which matters most: 1010–*c.* 35 and especially on the remarkable facts connected with the west ambulatory. Here St. Bernward's building had a crossing, transepts, a square chancel and an apse—crossing, chancel and apse being raised by eighteen steps above the nave. Below it, but only two steps below the nave, lies a crypt. This is low and vaulted and around it and open towards it ran an ambulatory much higher than the crypt, tunnel-vaulted, and provided with a west portal and two doors at the other ends into the transepts. This is a unique arrangement and one of great morphological interest.

Herr Roggenkamp tries to rediscover the units of measuring and the rules of proportions underlying the setting out of the building. He is, however, not fully up to date in his knowledge of similar work done outside Germany in the last fifteen years.

The book is, at about £4, not too highly priced and as competently produced as it is written.

N.F.

Books Received

ENGLISH FURNITURE STYLES 1500-1830, by Ralph Fastnedge. Pelican. 5/-.

BAÜTEN DER INDUSTRIE, by Walter Henn. Gallwey, (Munich).

BANK IN GARRICK STREET, W.C.2.

ARCHITECT, SIR HUGH CASSON

ASSOCIATE ARCHITECT, R. A. GREEN

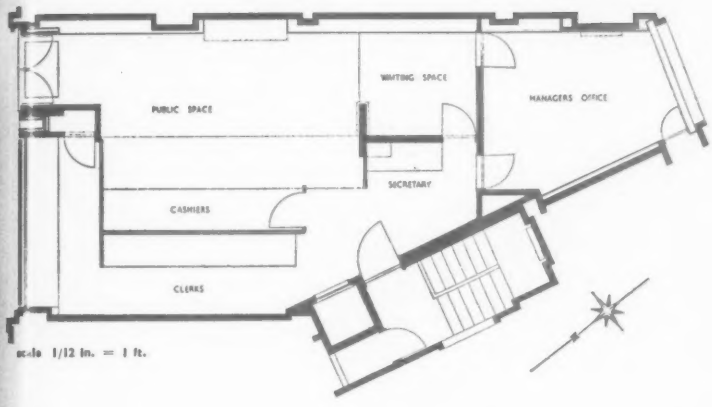
The basement and ground floor of 23, Garrick Street have been converted to make a branch office of Martins Bank, consisting of banking hall with clerks' and cashiers' working space, manager's office with ante-room, strong room, cloakroom with cleaner's store, and a boiler room. The wooden stair serving basement, ground and first floors, which was on the west side of the plan facing the front entrance, was taken out and a reinforced concrete one, in two straight flights between the half landings, inserted in its place between ground and basement only, together with a bullion hoist. The public entrance was carried across to the east side, leading straight into the banking hall, from which the manager's office is approached through a waiting area. The ground-to-basement flight of a second stairway at the rear has been sealed off, the remainder now affording sole access to the upper floors.

A reinforced concrete floor replaced the previous wood floor, and the wall piers were cut back and replaced by

1, *new front to Garrick Street.*

20

5



On the facing page, 1, 2, top left, manager's office; 3, top right, waiting space with the door of the manager's office beyond. 4, below, the public counter. The partition at the end of it is marble clamp—fixed to a 3 in. breeze block core. On this page, 5, a strip from one end to the other of the street elevation: from left to right, door handles, night safe and surround, and the bronze relief by Geoffrey Clarke.

Bank in Garrick Street, W.C.2.

new piers and concrete underpinning. The stair-well is trimmed off by a 9-inch brick wall, supporting a trimmer for the first floor. Otherwise all internal partitions are breeze. The only other structural alteration was the removal of an intermediate stanchion in the main ground floor elevation, to give a clear span: twin reinforced steel joists were put in, supported on existing but strengthened piers.

The elevation is in the form of a grille composed of sculptured, closely-set vertical rods set against the glazing, the whole within a white marble inner 'mount' and a black granite outer frame, which carries the lettering above. A sculptured relief in bronze by Geoffrey Clarke, illustrating by cryptograms the activities of Covent Garden Market, traverses the whole elevation.

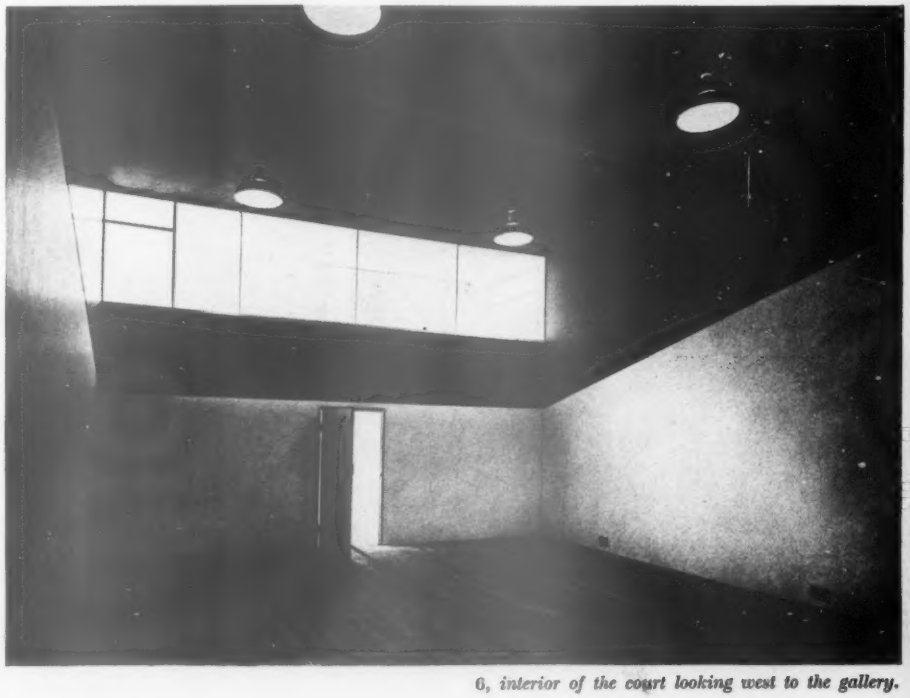
The irregularities of the internal wall faces were masked by ¼-inch ply Indian silver-grey wood panelling; the flush doors have same veneer. A suspended acoustic ceiling masks the beams supporting the first floor. Door linings, recess trims and built-in furniture are in Honduras mahogany. The banking hall floor is white cork carpet. A plinth of the same material in black protects the wall panelling.

Heating convectors, served by a gas-fired boiler in the basement, are set within panelling and furniture. Beside suspended fluorescent lighting for the cashier's and a desk light fitting for each clerk, the hall is lighted by tungsten fittings shining on the ceiling.

SQUASH COURT AT OXFORD

ARCHITECT, STEPHEN GARDINER

The building for St. Anthony's College, off the Banbury Road, is designed to allow for the addition of a second court later. The requirements of a squash court are simple, and to meet these the sloping timber top is devised—to incorporate louvres, stop off the brickwork at the highest point of the playline, provide the 2 feet 6 inches required above the playline at one end, and keep the height of the gallery down to a minimum at the other. Internally, colour has been used only to



6, interior of the court looking west to the gallery.

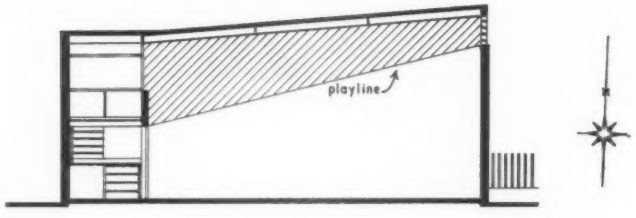
7

7, the louvres above the playline in the east elevation. 8, staircase up to gallery. 9, south elevation with entrance to court, from the south-west.

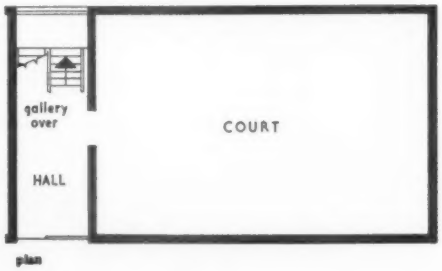
Squash Court at Oxford

aid the player. Above the playline the walls have been painted apple green, except for the end wall which is olive green, and the ceiling, except for the white steel joists, is cornflower blue to focus attention on the play area which is white. The staircase, which is without risers, is West African mahogany and the door into the court is painted lemon yellow.

The construction is brick piers, concealed in the wall thickness, which supports 10-inch by 6-inch steel joists on 6-inch square concrete footings concealed behind timber boarding. Infilling walls are externally local cream clay bricks and internally 6-inch blocks. The timber top is constructed of 3-inch by 2-inch framing faced with 3-inch Canadian western red cedar strips, and the roof itself is 3-ply felt on screed, on woodwool slabs, on 7-inch by 2-inch joists. The flooring in the court is maple, in the hall, granolithic.

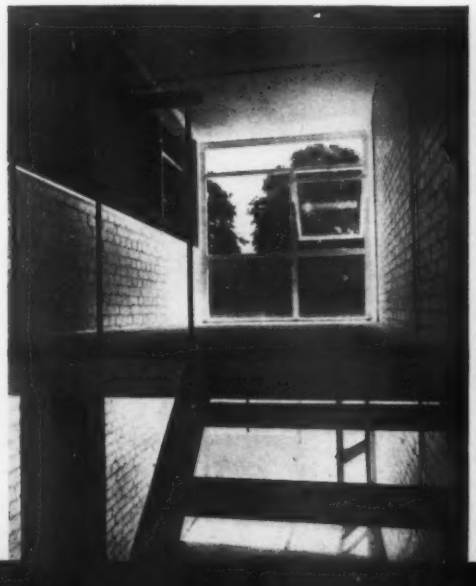


section



plan

8



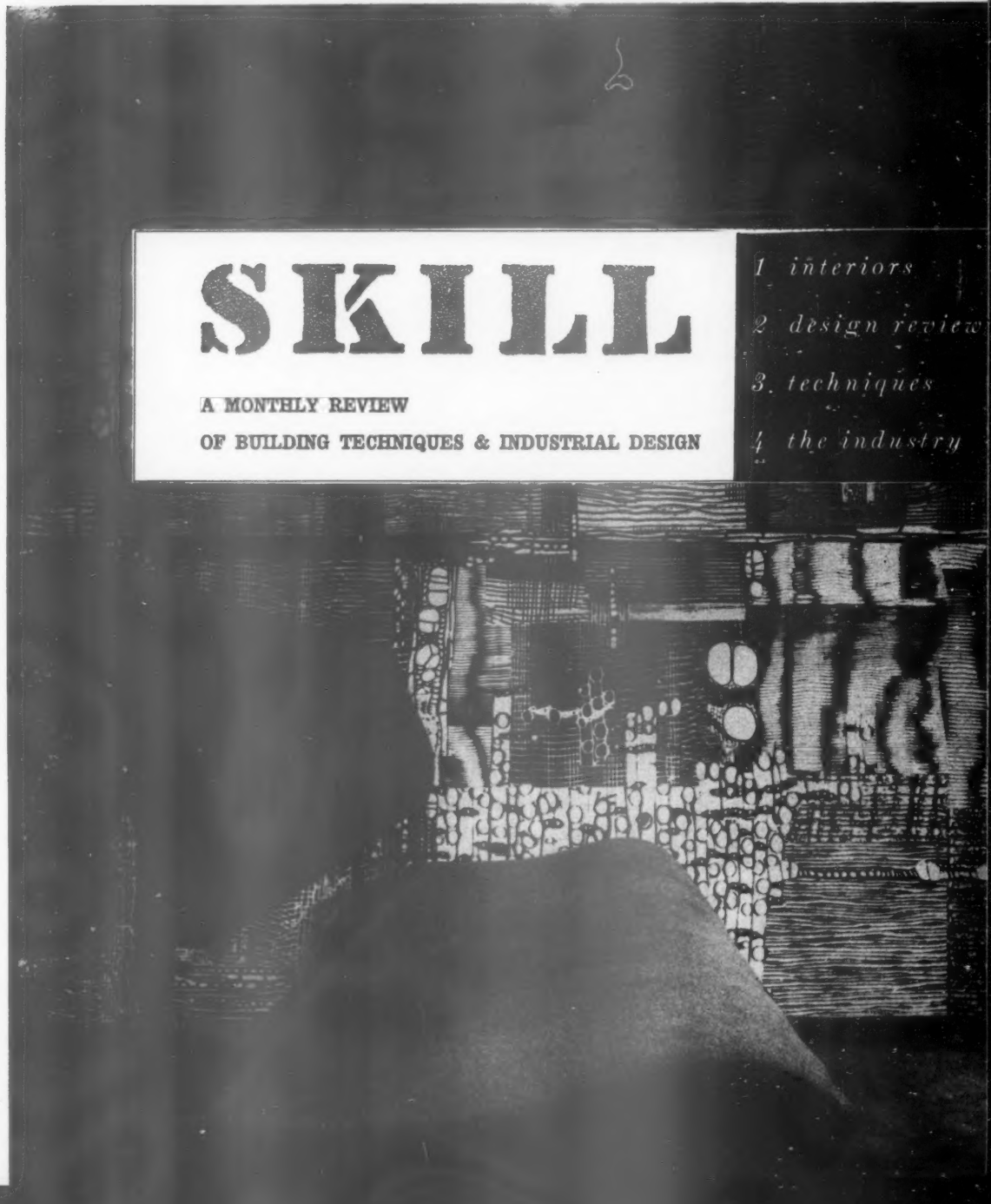
9

1 INTERIORS

SHOWROOMS IN HACKNEY ROAD, LONDON, E.2.

Designer: Clive Latimer

The showrooms of William Mallinson & Sons are in two parts: a veneer showroom, where large veneered panels are displayed, and, directly above it, the manufacturing showroom, illustrating the range of products the company manufactures and their applications. This second showroom has recently been redesigned, to a 3-foot grid, out of a typical warehouse floor, 60 feet by 24 feet, with a headroom

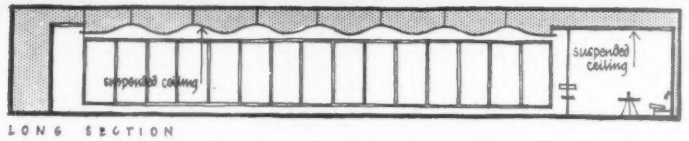


1, *mural by Nigel Henderson on the foyer wall, composed of micro-photographs of wood grains, enlarged to different proportions.*

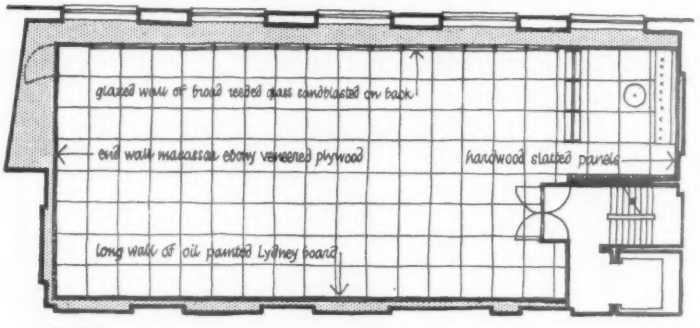
2

3

2 and 3, the wall visible consists of chipboard panels, bolted and wired for lighting at the rear. The 6-foot wide sections of the ceiling are also invisibly fixed on preforms. Below, 4, foyer, and 5, detail of mural on right-hand wall.



LONG SECTION


glazed wall of broad reeded glass sandblasted on back
end wall Macassar ebony veneered plywood
hardwood slatted panels
long wall of oil painted Lydney board

PLAN

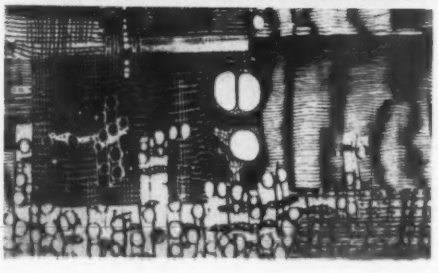
0 2 4 6 8 10 feet

SHOWROOMS IN HACKNEY ROAD, LONDON

of less than 8 feet, caused by large r.s.j.s 2 feet deep. The right-hand wall, looking from the entrance, contained warehouse windows at arbitrary intervals, which it was impossible to clean. Thus the two main problems of conversion were the treatment of the ceiling and the use of the only source of daylight while barring the old windows from view.

A structural shell was built, giving a false covering to the ceiling and each wall.

4



5

The ceiling is composed of obeche slats, in ripple-form, rising to a maximum height of over 9 feet under the longitudinal beams, and built in sections of 6 feet by 24 feet, which are invisibly bolted together and fastened to the joists above by suspended hangers. The ripple is shaped over moulded plywood preforms, placed at 3-foot centres across the room.

The left-hand wall is panelled with blue-grey painted chipboard in demountable 3-foot units, and thus easily lifted out for bolting and wiring at the back. The right-hand wall is in stock birch plywood and acid-etched reeded glass, and leaves a corridor from 15 inches to 30 inches wide between it and the window wall, which supplies illumination to the showroom and in addition is lit by fluorescent strips above (the old wall being painted white). It also ventilates the room by means of sliding-door apertures above the glass screen and three exhaust fans in the windows, and contains chokes for the room's ceiling lighting and heaters at floor level, which operate through grilles at the foot of the glass wall. The end wall of the room is of Macassar ebony. The floor consists of 1-foot squares of mahogany plywood, set at right-angles to each other to obtain a checker-board effect. The stand uprights are placed on the centre of the 3-foot grid. In the foyer, which contains seating and a board for discussion of drawings, a whole wall is occupied by a mural by Nigel Henderson, composed of micro-photographs of wood grains, enlarged to different proportions.

call Carsons to the Colours

We have, at Carsons, a department specially staffed and equipped, backed by full laboratory facilities, to help architects decide the right answer to any problems connected with paint or painting.

We invite you to call us in at any time; you will find that we can give expert guidance upon that most important matter—handling your recommended colour treatment in the soundest possible way.

The Carson service—which incidentally is absolutely free of charge—covers every aspect of paintwork in and on buildings. We carry out examinations, provide specifications, and visit the site to give any necessary technical advice on the work in progress.

We have built up this service with very great care, and we are proud of it.
It is at your disposal.

Walter Carson

AND SONS LIMITED

Manufacturers of Quality Paints since 1795

GROVE WORKS · LOMBARD RD · BATTERSEA · LONDON · S.W.11

HOW ASCOT JIGGED FITTING SAVES MONEY

106,000 Ascot Jigged Walled Fittings have now been put into new homes by 183 housing authorities.

How this fitting saves money is revealed by the following figures based on actual costings.

EXAMPLE ONE

Cost of fitting an Ascot 503 sink water heater sold for cash:

Using a Jigged Wall Fitting which had been installed when the property was built ... £1.7.0 — £1.10.0

Normal installation without a Jigged Wall Fitting ... ... £4.0.0 — £5.0.0

CASH SAVING .....say **£3.0.0**

EXAMPLE TWO

The effect of a Jigged Wall Fitting on the hire purchase terms for an Ascot 503/0 sink water heater:

Charge per week when the heater is connected to a Jigged Wall Fitting already installed 1/- -1/10 per week

Charge per week including cost of normal installation without Jigged Fitting ... ... 2/- — 2/5 per week

WEEKLY SAVING .....say **9d**

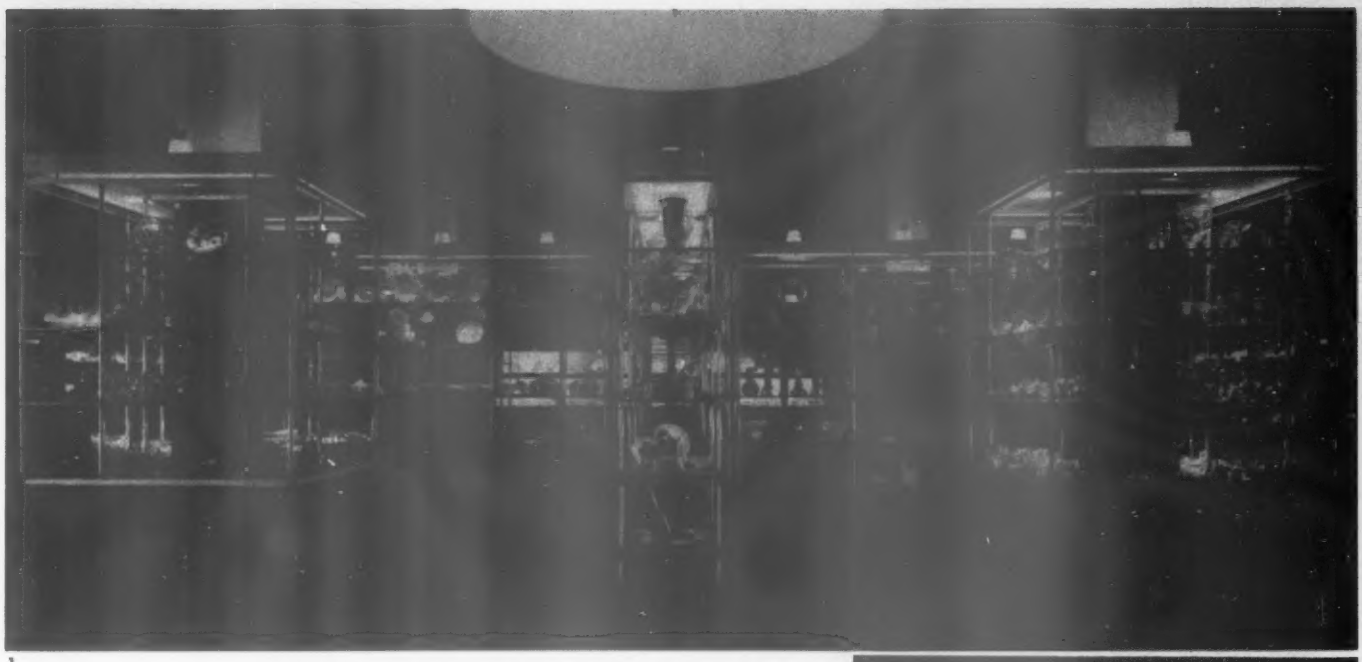
✳ *Note: These figures may vary from one district to another, but are reliable averages.*

The advantages of the Jigged Wall Fitting to the consumer and to the Gas Undertakings are real. The Fitting is supplied by Ascot to Gas Undertakings at cost. Vigorous efforts are indicated to get it installed in all new houses and flats; the cost of putting it in is trifling.

ASCOT GAS WATER HEATERS LIMITED · 255 NORTH CIRCULAR ROAD · LONDON · NW10

A member of the Parnall Group of Companies

WHG/A.104



1

1, view showing centre of the department, filled by a cruciform display unit, in which the removable backing panels are visible. 2, wooden-framed glass wall-shelving and, 3, shelving for antique displays, steel-framed and brass-trimmed.

2

SHOWROOMS IN VICTORIA STREET, LONDON, S.W.1.

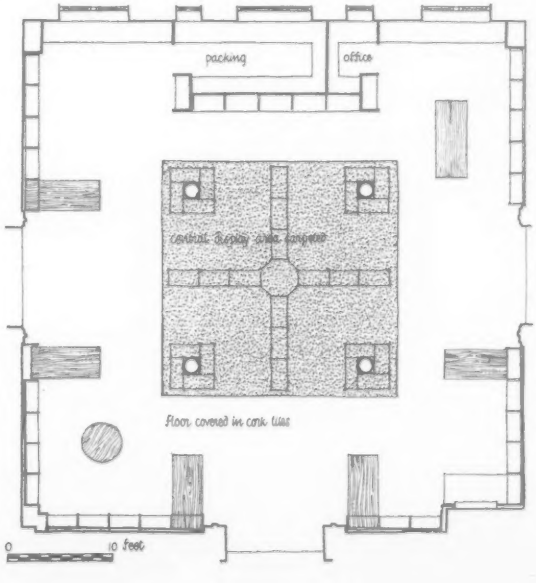
Designer: Misha Black
Assistant designers: Ellis Miles and Philip Lucey

The glass and china department of the Army and Navy Stores, Victoria Street, S.W.1, is part of the ground floor and consists of a room with entrances to other departments on three sides, and four Edwardian Baroque columns in the centre.

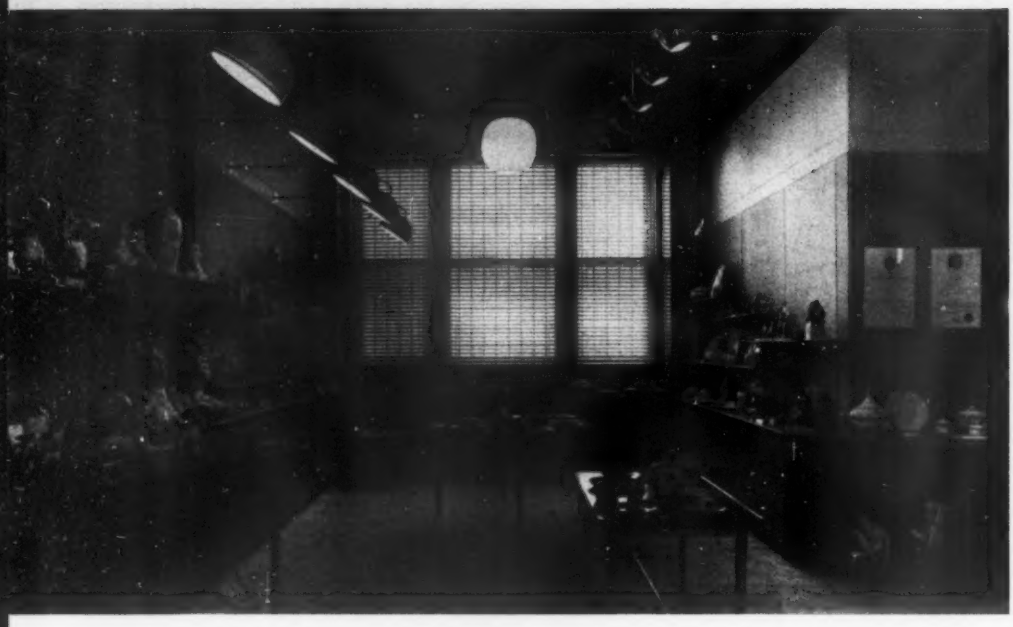
The main display has been kept in this central area as a focus: a central cruciform unit and showcases around the bases of each of the columns. All these display units are steel framed, stove-enamelled white, with polished brass trims and glass shelving. Around the walls there is timber-framed—mainly mahogany—glass wall-shelving, made up into alcoves with tables; and at the back there is a cashier and a small packing office.

The room itself has white walls and a pink ceiling; the central columns were encased in mahogany to the depth of the display cases. The aluminium dome reflector above the centre is painted matt white.

All wall lighting is on brackets, and the wall display cases have architectural strip lighting. The central area uses fluorescent lights, plus spotlights, above an egg-crate. The centre is carpeted; the rest of the floor is cork tile.



3



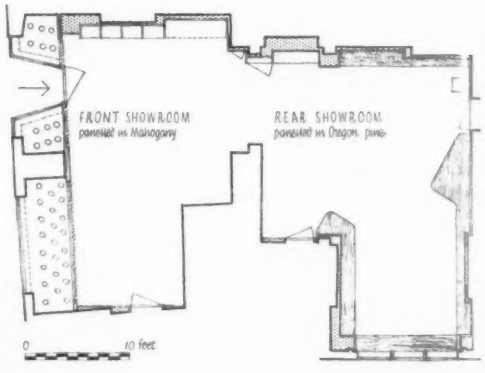
1, rear showroom, used to display porcelain. The ceiling, incorporating adjustable light fittings, is suspended and painted deep blue.

SHOWROOMS IN BOND STREET, LONDON, W.1.

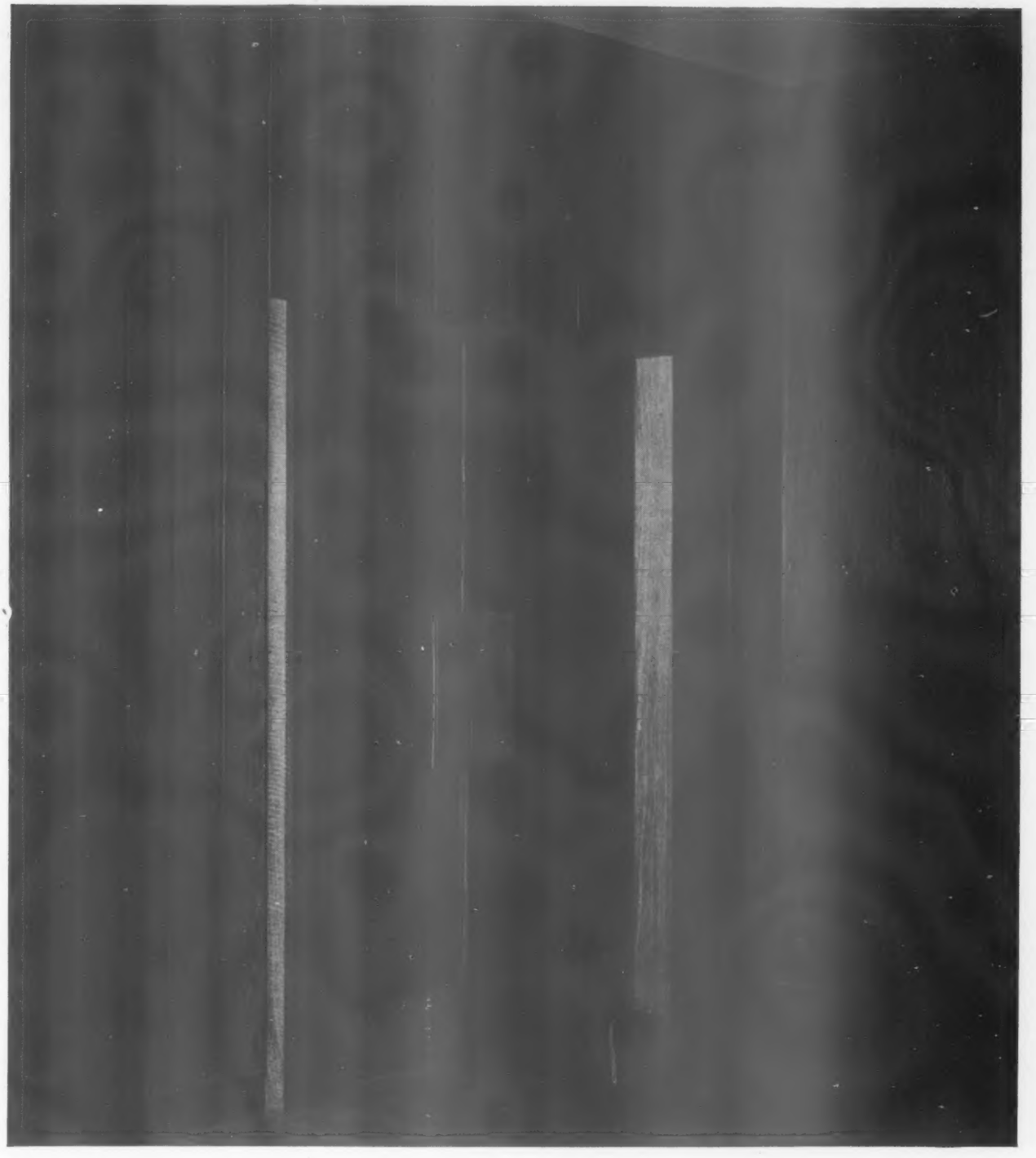
Architects: O. Gundlach-Pedersen and Ebbe Andresen.

The redecoration of Georg Jensen's showrooms in New Bond Street entailed stripping the existing showroom and installing a new lowered ceiling and new cases and displays. The front showrooms, displaying silver and stainless steel, are fitted with new Cuban mahogany cases, about 7 feet 6 inches tall, with matt lacquered finish, closed in above with flush panelling. On the left-hand side, a special niche was incorporated containing a settee upholstered in red leather.

The rear showroom, designed to display porcelain, has a lowered suspended ceiling in which adjustable lighting units are incorporated. Here again Cuban mahogany was used but the walls are mainly covered with plaited Danish matting above cupboards of Oregon pine. The windows at the end of this room have aluminium venetian blinds and the total floor area is covered with grey Wilton carpet. All the visible electric fittings are Danish; the backgrounds have been left in their natural colours, except for the ceiling, which is painted deep blue.



2, a view of the rear showroom, seen at right angles to illustration 1. The backing to the display shelves is of Danish matting; the carpets are grey Wilton.



Entrance to Board Room of British-American Tobacco Company Limited

Designer: Professor R. D. Russell, R.D.I.

Photo by courtesy of British-American Tobacco Company Limited and the Council of Industrial Design

For internal finishes there's nothing like WOOD

Issued by THE TIMBER DEVELOPMENT ASSOCIATION LIMITED · 21 COLLEGE HILL · LONDON · E.C.4 *and branches throughout the country*

Docker

VYDOK

Dockerlux

VYDOK
The Perfect
Emulsion Paint
in matt and
eggshell finishes

DOCKERLUX
The finest
Gloss Paint
in the world

DOCKER BROTHERS, Ladywood, Birmingham 16. **LONDON SHOWROOMS: 17 BERNERS ST., W.1**

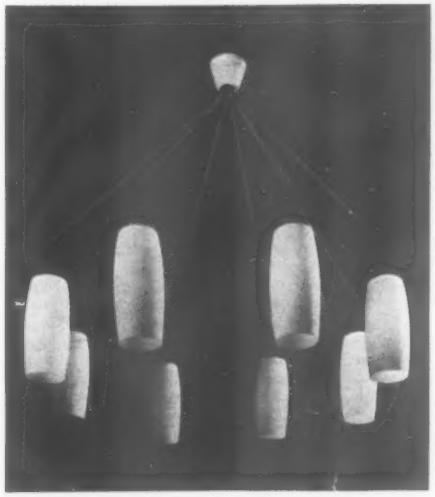
2 DESIGN REVIEW

FORM IN GLASS

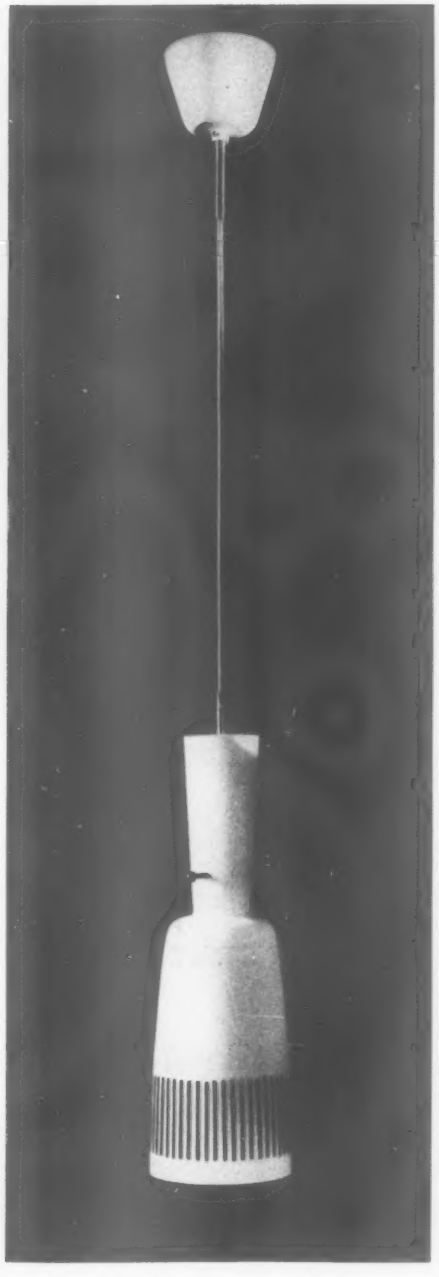
Opal glass is not a material commonly associated with art. Frederick Thomas & Co. have embarked upon a range of lighting fittings, 1, which rely for their effect

1, *range of lighting fittings by Frederick Thomas & Co.*

entirely upon the shapes and grouping of the glass shades. The glass is three-ply opal made in Sweden and England. Inside, the shade is highly polished. The opal finish on the outside is ground to a remarkably fine texture. The tall shapes are evocative both of modern sculpture and of the ancient world. They may owe some of their charm to romantic associations with archaeology and more leisurely cultures. We could do with more of this. The shades can, as shown, be painted, but there is absolutely no need.



2, *multiple pendant fitting, the members of which can be in any number and grouping desired.*



3, *single pendant fitting, with shade G309.*

The first designs in this range to be marketed are the pendant fittings. Suspension is by plain brass tube or by flex. The flex emerges from a short length of tube incorporated both in the ceiling unit and the lampholder. This gives a quality of finish quite rare in conjunction with extreme visual simplicity. The units can be assembled in any number and grouped as desired, 2.

Prices. Shades, *left to right*, in 1: G295 £1 11s.; G307 £1 16s.; G309 with fired black decoration £2 18s.; G310 £1 17s.; G293 £1 11s.

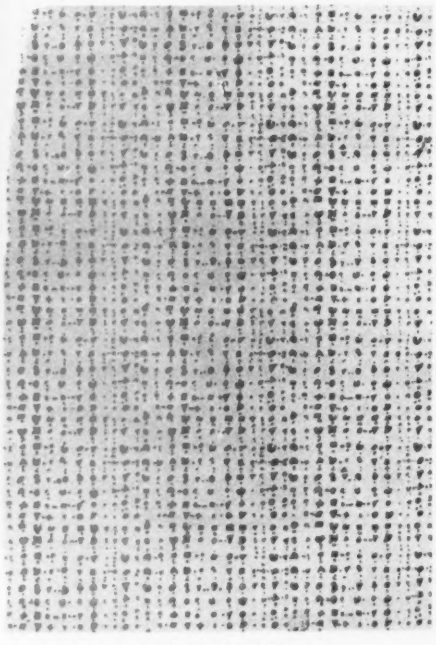
Suspensions. Single tube unit with satin finish 2 inches BSS fixing plate and cover, wired complete with BC lampholder £1 13s.; flex, finished satin brass with matt white ceiling cup, 2 inches BSS fixing plate, wired complete with ¼ inch diameter white circular flex and BC lampholder £1 5s.

All prices quoted are retail prices subject to an increase of 22½ per cent purchase tax.

Diana Rowntree

WALLPAPERS

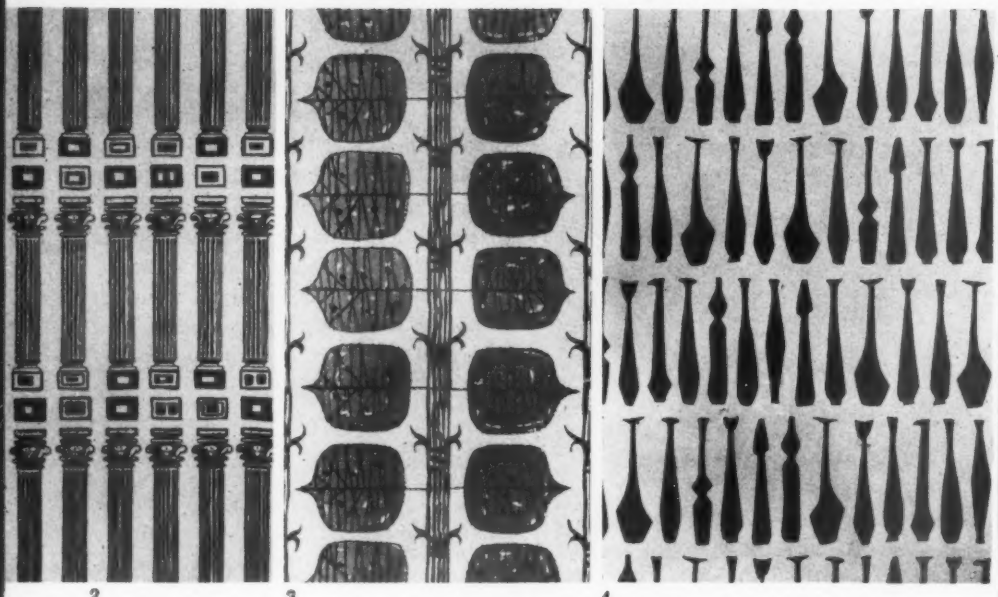
This series compiled by Wallpaper Manufacturers and called the Palladio range is particularly for the use of architects. No one likes to be told what to like, so the range starts off under a handicap as far as architects are concerned. Perhaps they are more intent than other people on seeing that the wallpaper lies back on the wall and does not compete with the foreground objects. In this sense Brackley Weave by Robert Nicholson, 1, is an architect's wallpaper, a useful



1, *Robert Nicholson's Brackley Weave paper.*

addition to the well-designed small scale wallpapers that have appeared since the war.

Columns, 2, arouses instantaneous resistance, outraging the fossilised remains of Renaissance lore in the buried strata of our architectural education. A further horrible suspicion arises that it is on these columns that the 'architectural' pretensions of the Palladio range rests. In



2 3 4

2, further examples of the 'Palladio range': 2, Columns, by Robert Nicholson; 3, Avenue, by R. Nicholson, and 4, Pharos, by P. Devenish.

fact Nicholson's usual skill has been exercised in this design. Used in rooms of contemporary proportions it can be a powerful and useful background, capable of giving a crisp and positive unity to an undistinguished interior. P. Devenish's Pharos, 4, is another design whose scale has been carefully and successfully considered, unlike Columns it is probably best used with minimum contrast in tone between the motif and the background.

The really outstanding paper is Nicholson's Avenue, 3. This is imaginative and painterly. The simple motif and layout makes a masterly contrast with the broad handling of the paint. It is due as much to the technique by which the line is applied to the paper as to the rich subdued rather dirty colour, that one thinks of this design rather as a painting than as a pattern. We have seen this assurance and atmosphere before, in a range designed by painters, and I think it is an aspect of wallpaper design that is underdeveloped. If Wallpaper Manufacturers Limited are right in their flattering assumption that architects go for atmosphere, perhaps they will commission more designs of this kind. Anyone who has bought wallpaper knows the appalling difficulty of envisaging the effect of a large wall surface from a single coiling length of paper. There is bound to be an element of risk in such a choice. If you cannot be quite safe, why not back your fancy in this field, where the results after all are not irremediable?

Prices: Brackley Weave 26s. per piece
Columns ... 28s. „ „
Pharos... ... 28s. „ „
Avenue ... 45s. „ „

D.R.

3 TECHNIQUES

ARCHITECT/MANUFACTURER CO-OPERATION IV

by Noel Moffett

In the September issue we began our account of the collaboration between the Arcon group of manufacturers and their architectural consultants. In it we discussed work done in the immediate post-war period when Arcon, like everyone else, were chiefly concerned with housing. This month we conclude by outlining Arcon's second phase, when the centre of interest shifts to the design of whole structures for export; and by discussing their research into the design of building components which, in the architects' view and ours, has always been the key to the experiment.*

The pattern of development which ensued from work on the demountable house has been followed on all Arcon's later projects. Research leads to preparation of a design, which is realized in a prototype. The design is then manufactured on a pilot run and is finally put into mass production. Mass production, however, does not necessarily mean the conclusion of development, for the Arcon consultants like to think of all structures as prototypes, to be modified as soon as modification becomes desirable and feasible. This is particularly true of the long series of roof structures which occupied the Group's attention after the Arcon Mark V house. In 1946 Group members found that they could not get licences for steel, timber and other materials for building in this country. They therefore called on their architects to look into the possibility of designing for overseas markets.

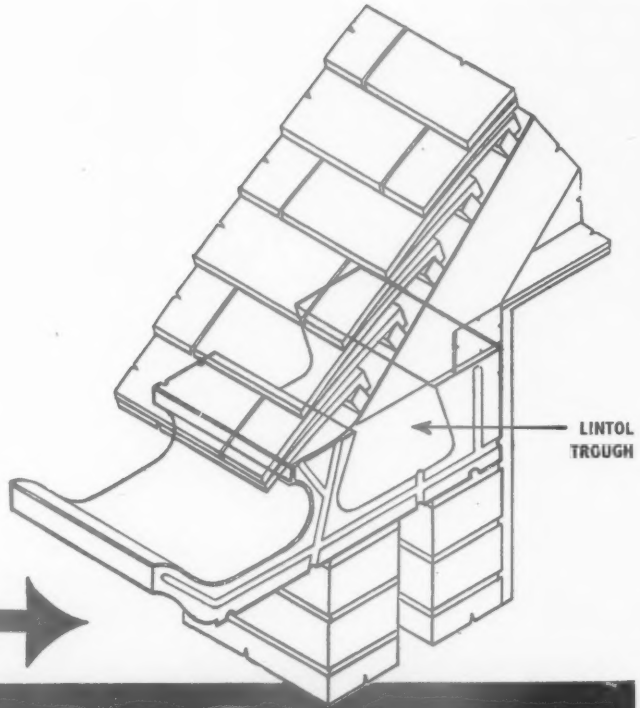
It was found that in many countries of the world there are satisfactory indigenous materials of which walls and partitions may be built. Everywhere, however, there seemed to be a very real problem in constructing roofs of a permanent nature for all types of buildings. At the instigation of Edric Neel, the Arcon Tropical Roof was therefore designed to meet this situation. The design was based on the double leaf principle, an outer roof providing protection against the weather—particularly against the heat in hot climates—with an inner ceiling so arranged as to ensure that an uninterrupted flow of air between the roof and the ceiling maintained a reasonable temperature inside the building. The span chosen was 30 feet, the structure was tubular steel designed to resist hurricane conditions and the cladding corrugated asbestos sheeting. On the ridge a curved sheet was used in place of the orthodox ridge piece to avoid traditional complications. Taylor Woodrow now formed a subsidiary company, Taylor Woodrow (Building Exports) Ltd., to market Arcon products abroad. A prototype was erected at Southall and an order for 1,400 bays was placed by the Anglo-Iranian Oil Company. This design with small modifications continued to be the main building in demand for the next four or five years. However, the Tropical Roof suffered from an inflexibility due to there being only one fixed span and bay width. The initial design was rather based on the Anglo-Iranian Oil Company's requirements and further research showed that far more economical buildings could be attained by relating the span and bay width to the maximum span under certain loadings of the purlin used and the maximum spacings of purlins to take various sheeted materials. On this basis three spans were designed, the increase in span being in each case related to the addition of an extra purlin on each roof slope. Three different eaves extensions and varying ceiling heights were designed on the same principle, together with a system of forming hips, 'T' and 'L' junctions. All these variations helped towards the possibility of the structure which was called simply the 'Arcon Roof,' 1, being erected in over two thousand different ways. This, of course, overcame the inflexibility of the old Tropical Roof, and at the same time uses components designed to their maximum structural efficiency.

One of the problems endemic in an organization such as Arcon is how to determine what work is to be done next. The architects themselves divide their work into three categories: fundamental research into

[continued on page 413

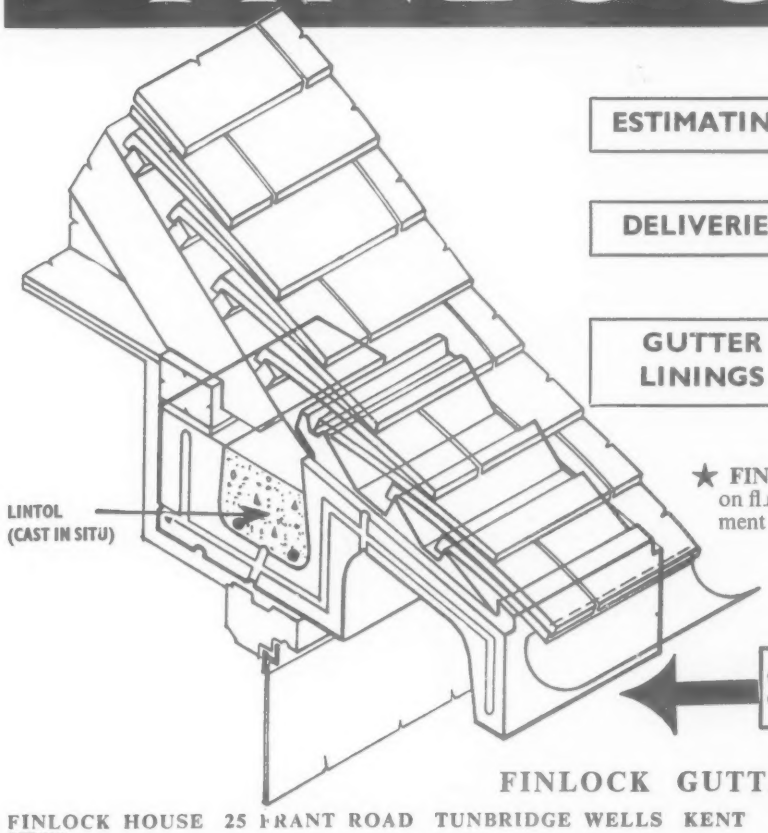
* The firms which now constitute the Arcon group are as follows:—Imperial Chemical Industries Ltd., Stewarts and Lloyds Ltd., Taylor Woodrow Ltd., United Steel Companies Ltd., Williams and Williams Ltd. Until 1952 the design consultants were Edric Neel, Raglan Squire, Rodney Thomas and A. M. Gear, who worked together under the name 'Arcon, Chartered Architects.' On the dissolution of this partnership in 1952 and the taking over of the name Arcon by the manufacturers, Rodney Thomas and A. M. Gear collaborated together as the group's consultants from their separate offices.

* Cut Gutter Costs
* Cut Lintol Costs
* Cut Downpipe & Drainage Costs
* Cut Maintenance Costs
* Improve appearance
* Improve insulation by sealing the eaves



GUTTER

FINLOCK



ESTIMATING — We take off quantities and are completely responsible for seeing that correct goods arrive at site at correct time.

DELIVERIES — Our transport covers the British Isles with a 24 hours' service.

GUTTER LININGS — FINLOCK metal linings are guaranteed for 20 years and installed promptly on site by our Service Dept. Write for details.

★ **FINLOCK GUTTERS** can be used effectively on flat-roofed buildings. Our technical department is at your disposal.

FINLOCK GUTTERS LIMITED

FINLOCK HOUSE 25 FRANT ROAD TUNBRIDGE WELLS KENT Telephone: Tunbridge Wells 3396/9

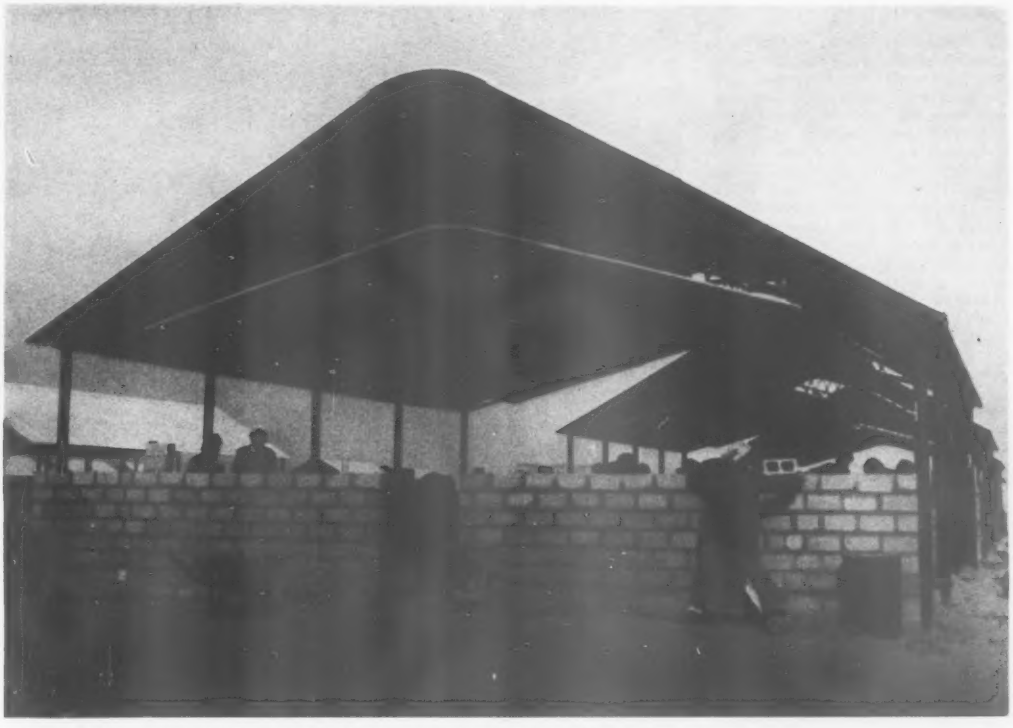
DHB/2329

EXCITING new Tibor Textureprints, woven in high quality textured cotton, incorporating Lurex non-tarnishing metallic thread. In guaranteed fast Vat colours, they combine the beauty of colour weaving and printing. The design illustrated is called "Avocado". Produced by: Tibor Ltd., Stratford-on-Avon.

VICEROY deep all wool pile rug with textured effect, available in a variety of colours and sizes to your specification. In three grades, "Standard," "Super" and "Supreme." The design shown is "Caribbean" by Tibor Reich, F.S.I.A. Produced by: S. J. Stockwell and Co. (Carpets) Ltd., 16 Grafton Street, London, W.1.

THE "BALMORAL" CHAIR designed by Ronald E. Long, M.S.I.A., is an example of the new range of upholstered furniture by R. S. Stevens. The outside is covered in Tibor's deep textured wool fabric "Mesh" Black/White with "Stratford" Black on the inside. Produced by: R. S. Stevens Ltd., 209 Wood Street, London, E.17.

[continued from page 412]



1, Arcon roofs in use at a workers' camp at Kuwait. Note the ventilated roof space and the use of local walling.

the design of components, the application of this research and the design of structures. It is, of course, the last of these which is the most immediately rewarding to members of the Group and the first which is, from the point of view of 'Architecture,' the most interesting: but it is the experience of the architects that the design of structures for immediate marketing contributes in unexpected ways to their long-term research in components. There is no general pattern for determining which projects shall be undertaken: sometimes the Group members or the Marketing Agents, as the result of information received from their representatives, suggest a particular line of development or the Consultants themselves, through their knowledge of architectural and structural problems, submit their own proposals. Whatever the reason for starting a project, all have to go through the same drill before they are ready for marketing. First approval of the project by the Arcon Executive Committee, which meets each month and is composed of representatives of the Sponsor Companies and the consultants, then Research, Testing, Development, Prototyping, Pilot Run and finally Production.

Whilst there is a certain amount of time spent in obtaining information which is of general use, most of the Research is devoted to particular problems or projects. Having prepared designs in some detail, the Consultants then collaborate with the various manufacturers concerned in order to determine the best materials and methods of manufacture, at the same time contacting the Marketing Agents in order to ensure that they have taken account of the problems likely to arise in transport and erection.

When any necessary modifications have been made, the Consultants prepare preliminary costs and maybe erect a number of mock-ups or hand-made components to test out their ideas. If it is agreed to continue the project, it then moves to the stage of development, where the Consultants prepare detailed component and general arrangement drawings and agree these with the manufacturers before the Marketing Agents obtain firm prices.

A prototype is erected from the first run-off and a check is made of the dimensional accuracy of the building, when the methods of packing and of erection are finally settled. In most cases drawings have to be prepared for an erection booklet which has to be translated into five different languages.

All buildings in production are under constant review by the Consultants and the companies concerned, and if modifications are necessary they are prepared by the Consultants and introduced into production at a time agreed with the manufacturer and the Marketing Agents. During this period the Consultants are carrying out what is termed 'Technical Service' that is to say, preparing drawings showing how the buildings can be used for different purposes, advising on the structures under different conditions, and preparing details of any special component required for a particular job.

In addition to the Tropical and Arcon Roofs, a wide range of structures varying in size, shape and function has been developed, along with alternative forms of cladding, partitions, windows, etc. Since the dissolution of the Arcon partnership this work has been carried out in A. M. Gear's office. So far as the export market is concerned the buildings or components may be divided into three groups:—

(1) Industrial buildings (factories, godowns, transit sheds, etc.).
(2) Amenity buildings (hospitals, welfare buildings, offices, schools, etc.).
(3) Housing, of many types and standards.

So far as this country is concerned, the main accent, to date, has been on industrial buildings for light manufacturing processes and storage. These include a storage building which enjoyed a phenomenal commercial success, 4, a prefabricated

Three structures developed by Arcon: 2, three-pin portal frame designed for use in an open-sided building with locally constructed walls. The salient characteristic of this structure is its extreme lightness and simplicity of erection. 3, an Arcon sawtooth roof in a factory at Bracknell. Note the stressing wires in the plane of the roof. 4, an Arcon storage building (50 feet span) in process of erection at a Government sisal factory in the Dominican Republic. The tubular purlins are fabricated into a pole which can serve to hoist the trusses when they are assembled on the site.

2

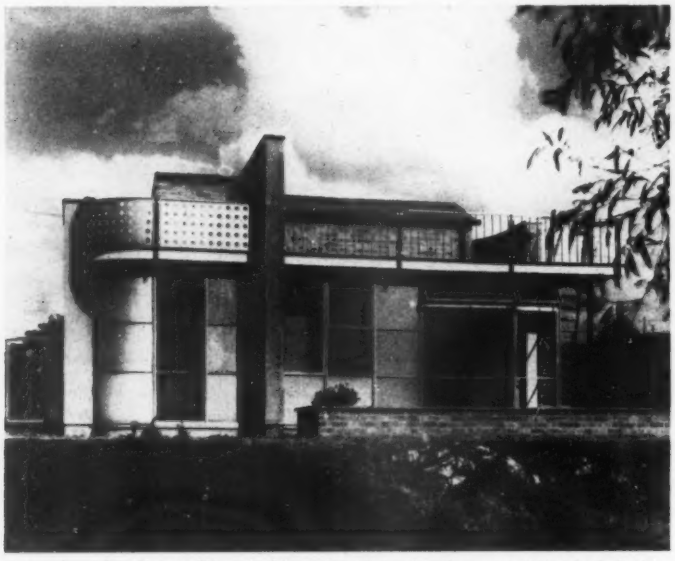
3

4

timber house designed for the Australian Government, a saw-tooth roof (principally for the cotton and jute industries), 3, and a three-pin portal frame for use in school buildings in Ceylon, 2.

research

It has been pointed out that the consultants' research work is divided into two categories: component research and the application of that research. Thomas has called this side of their work 'The design of pieces with which to build and the use of those pieces.' This designing of building 'pieces' is a continuous process and the architects use their components in all their designs for buildings and for complete structures. There is one application of component research, however, which is especially important. This is a curious building erected in 1944 at Witton in Birmingham and designed by Gear and Thomas



5, experimental building at Witton in Birmingham designed at the request of the Metals Division of ICI to test the behaviour of non-ferrous metals in conjunction with other materials.

at the request of the Metals Division of ICI, 5, with the particular idea of observing the behaviour of non-ferrous metals and aluminium alloys in combination with other building materials. The strange shape of the building is due to the fact that it illustrates as many situations as possible where these materials could or might be used. The building is also designed so that further components and new materials may be inserted at any time and their weathering qualities and erection technique tested.

The architects consider that it was built too early from an economic standpoint. Many of its features are still at a controversial and experimental stage of development, and it will be many more years before its value will be appreciated. The roof was concrete and the sides curtain walling with prefabricated wall, window and door panels all of a carefully calculated modular size and thus interchangeable.

In the category of 'component research,' which the architects regard as the most important part of their work, much of interest has been done in both offices. Three examples have been chosen which it is hoped will give some idea of the very wide range covered by this research, namely, 'secret-fix' and curtain walling developed in A. M. Gear's office and Rodney Thomas's comprehensive dimensional research.

secret-fix

ICI felt that their corrugated aluminium sheet, designed for both roofing and wall cladding, was not as popular as it should be because it was necessary to fix it to roof purlins and wall frames by bolts and washers in a similar manner to corrugated iron or asbestos. Thus, although it was a better and more expensive material, it was associated in people's minds with these cheaper materials. Also the washers and bolt heads, being exposed to the weather, sooner or later produced unsightly weather stains on the face of the sheet. The solution found consists of an extruded aluminium alloy cover strip, with a profile identical to that of the trough-shaped corrugation of the sheet, so designed as to receive on its underside the head of the fixing bolts, these in turn being secured to the purlins or sheeting rails by special clips.

This 'secret-fix' method has now been patented by ICI and is marketed as 'Kynalok secret-fix cladding,' 6.

6, 'Kynalok' secret-fix cladding. Detail showing the system used in conjunction with a range of standard factory windows. Note the absence of bolt heads.

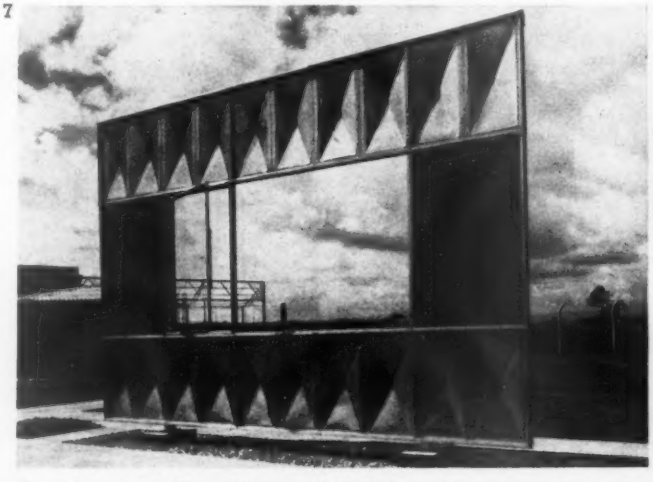
curtain walling

Taking advantage of the experiments in the use of curtain walling carried out on the ICI building at Witton, a new system was designed in 1952 using a framework of aluminium extrusions into which could be fitted windows, metal or plastic panels and glass or similar sheet materials. A prototype composite panel was erected at Southall for the purpose of examining the behaviour of a great variety of materials and of testing the design of transomes and mullions, 7. Some interesting discoveries were made. A stainless steel sheet in the form of a flat pyramid was designed and specially manufactured. The 'mock-up' infilling sheets were hand made with one side of the pyramid welded and, when a tool was designed for mass-production pressings, it was found that there was a danger of penetrating the sheet at the point of the pyramid. For this reason the apex of the pyramid was deleted and a small flat panel substituted, 8. The horizontal cill members had at first been designed on traditional lines with a drip which allowed water, running down the face of the building, to drip clear of the panel beneath the cill. After the 'mock-up' had been exposed for several months it was found that the upper part of the panel was staining rather badly, while the lower portion was clean where it had been washed by the rainwater. A new head glazing bead was, therefore, designed which, instead of forming a drip, allowed the rainwater to run down the complete face of the panel. By this means, the whole surface of the panel is now weathering evenly.

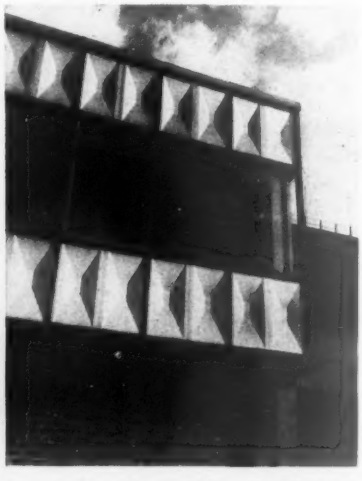
dimensional research

During the evolution of the design of the Mark V temporary house the Arcon architects had designed a series of 'cover technique' details to cover the junctions of prefabricated

7



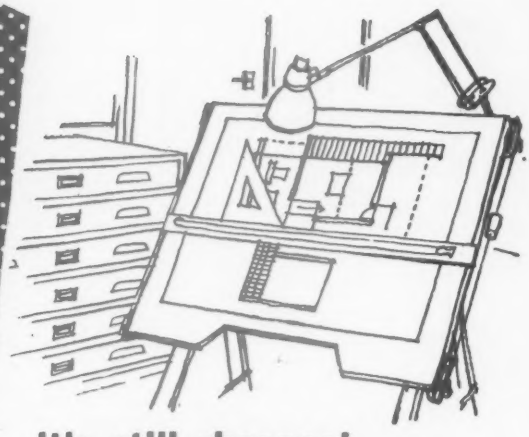
8



7, prototype curtain walling panel set up at Southall. This consists of a frame built up of aluminium extrusions with pyramidal panel infillings made of stainless steel. In this version the panels run to a point in the apex. Later a small flat rectangle was introduced into the centre to give better wear and cheaper manufacture. 8, curtain walling as manufactured applied to an office block designed by A. M. Gear for Messrs. Samuel Fox.

[continued on page 416

...specify solid fuel for the heating



...it's still cheapest— and far more efficient with the latest appliances

For continuous domestic heating, solid fuel is still far and away the cheapest fuel. And, used in modern appliances, it is far more efficient than ever before. New fires, for instance, with restricted chimney throats and convection jackets, give up to 40 per cent more heat from the fuel. Like the new stoves, cookers and boilers, they're much easier to run, quick to clean—and very well made.

For dwellings of all kinds these up-to-date appliances are a wise—and farsighted—choice. They will give years of fine service economically.

HOW TO GET THE FACTS

The Coal Utilisation Council has established various services to help you get the right appliances for each job and ensure correct installation.

Recommended Appliances Lists of recommended domestic solid fuel appliances are published twice a year in co-operation with the Solid Smokeless Fuels Federation and are yours for the asking.

The C.U.C. publishes booklets on appliances, their installation, fuel storage and insulation, all of which would be useful to you or your staff. If you would like copies of all, or some, send for them by filling in the coupon below.

C.U.C. Training Centres where courses are held in London and Glasgow for architects', local authorities' and builders' staffs. Instruction in correct installation is given by experts. These Training Centres can be visited by housing officials, architects, builders and others professionally interested in domestic heating by appointment. For those who cannot attend courses in London and Glasgow, special one-day courses are held in Technical Colleges in various parts of the country.

C.U.C. Information Centres in many major cities display the latest appliances, have leaflets, and can give you expert information. See the addresses below.

C.U.C. INFORMATION CENTRES

Birmingham : Burlington Passage, New Street.
Bristol : 5 Broad Quay, City Centre.
Cambridge : 24 St. Andrew's Street.
Cardiff : 9 Castle Street.
Glasgow : 341 Bath Street.
Leeds : 99 Albion Street.
London : The Building Centre, 26 Store Street, W.C.1.
Manchester : 257 Deansgate.
Newcastle upon Tyne : 18 Saville Row.
Nottingham : 4 & 6 St. Peter's Gate.

SEND COUPON FOR FREE BOOKLETS

To the Coal Utilisation Council, 3 Upper Belgrave St., London, S.W.1

Please send me the following:
List of Recommended Domestic Solid Fuel Appliances
Details of C.U.C. Installation Courses

And also copies of booklets:
Warmer Homes with Solid Fuel
Architectural Design Data for Solid Fuel
Fuel Stores for Houses and Flats
Make Your House Cosier in Winter (*Insulation booklet*)

(Please cross out those not needed)

Name .....

Address .....

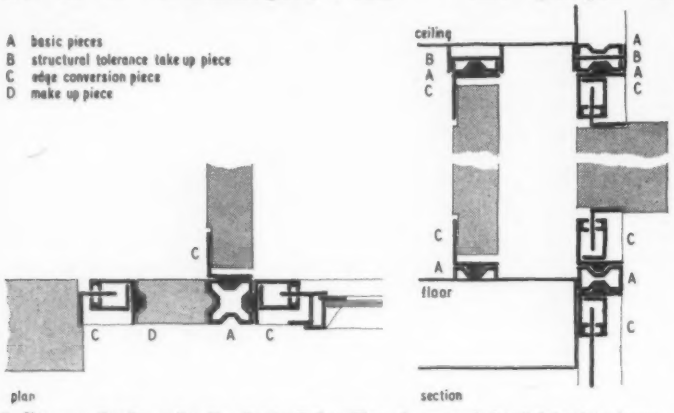
..... (A.R.)

continued from page 414]

wall, floor and ceiling panels. They later considered these design details crude and unsatisfactory, but they had nevertheless served to show them the great importance of the design of joints.

In 1951 the Group members allocated a sum of money for research into the use of interchangeable components which could be used to build a wide range of prefabricated houses, designed particularly for export to other countries. Rodney Thomas undertook this research, which has become what may well be considered the most important work carried out by the Arcon organization since its formation in 1943. So as to make the components of the Export House interchangeable, the first designs were based on a modular size. Thomas realized, however, after examining the problem in detail, that the module permitted interchangeability only if all components were of the same thickness, had the same edge shape and were manufactured to the same tolerance. The units already on the market varied in all respects.

The architect therefore had to undertake some 'pure' research, taking a detached view and going back to basic principles. He worked on this research for three years, and in June of this year he presented his findings to the Group members in the form of a colour film explaining his proposals step by step.



9, diagrammatic plan and section showing Rodney Thomas's proposals for attaining interchangeability in panel construction.

Thomas claims to have worked out a dimensional system which enables the architect—any architect—to build accurately to any dimension with different ranges of mass-produced components and to fit them all together without scribing, irrespective of their surface dimensions, thickness and edge shape, so as to provide as much dimensional freedom in prefabrication as is possible with traditional methods.

Anyone who has designed for prefabrication and mass-production accepts the inevitability of manufacturing inaccuracies and his designs always allow for 'tolerances,' which are usually calculated as occurring somewhere between a stated maximum and minimum. The Arcon consultants had already designed various forms of flexible joint to deal with this dimensional expansion and contraction. Thomas now discovered that the varying space at the joints really played a more important part than the components themselves. Joints designed to take up mechanical movement caused by tolerances could also take some of the other dimensional burden. He still talks of the excitement which followed his realization that a shop-keeper can weigh anything in his shop with only a very few weights, and that he could apply the same principle to the problem of dimensions by selecting a series of dimensional 'weights' and applying them at predetermined points. It was obviously desirable that there should be as few dimensional pieces as possible. Five 'weights' of 1, 2, 5, 8 and 9 inches were chosen, from which 'dimensional units' could be formed to deal with inches (or centimetres), fractions and tolerances. With the addition of a foot 'weight' an architect could now build to infinity with complete accuracy, the foot sizes being incorporated in the building components. Conversely, he could leave an opening in any length of wall of any dimension and could therefore mix components of any size together, even if some were in feet and others in metres.

This means that building can be put on a 'Meccano' basis and any new ideas and techniques can at any time be accommodated and combined with other techniques.

It is too early to tell if this particular departure will come to any good—for the mere ability to fit parts together is not the be-all and end-all in building: but it is interesting that a group of manufacturers should have instructed their architect to look into a matter which up to now has been nobody's business.

conclusion

Perhaps the first point to be made in conclusion is to remark on the value of the architect's presence in an organization of this kind. Now that industrial concerns have become the originators of architectural form—or at least of building component form—it is important that architects should be present to assist them. Many industrial firms have architect consultants: the special significance of this particular consultancy derives from the fact that the clients are a group of firms, covering between them a wide variety of building materials, and that they have grouped together precisely in order to investigate the common use of these materials in building. It is this underlying purpose which makes the design of components of greater importance than the structures in which they are progressively embodied. These structures have great historical interest in that they are the best answer that a very resourceful organization could find to a given problem at a given moment, and as such they represent a kind of pioneering which must be done if we are to get an industrialized building which we can unreservedly describe as 'architecture.' Thus it is that their most lasting value must be sought in the experience their design has occasioned.

[Trade Notes on page 418

THE LIMMER & TRINIDAD LAKE ASPHALT CO. LTD.
STEEL HOUSE, TOTHILL STREET, WESTMINSTER, S.W.1 | TELEPHONE: WHITEHALL 6776

An example of a hotel purpose-made window. A general view showing the pleasing facade enhanced by Beanes windows.
Photographs by courtesy of the Proprietors of the Tavistock Hotel, Ltd.

WE MAKE THE CHARACTER YOU CREATE

In an age of standardisation and mass production, there are still some trades which require the exercise of human skill and ingenuity. One of these is the ancient craft of metal working seen at its most dexterous in the fabrication of purpose-made metal windows.

We like to think, as one of the oldest and most experienced practitioners of this craft, that it is our business to give practical expression to your finest thoughts—in fact, to *make* what you *create*. Why not write to us and find out more about our purpose-made windows, and how they can be of use to you in working out problems to which there is no 'standard' solution.

A. Beanes & Co. Ltd.

Metal Window Manufacturers for 70 years

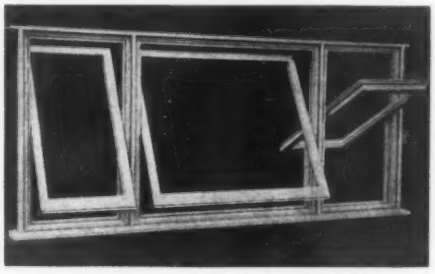
BRIDGE WHARF,
BISHOPS BRIDGE ROAD,
LONDON, W.2.
Phone: PADdington 4058 / 3144

continued from page 416]

4 THE INDUSTRY

WOOD CASEMENTS

Janes' Modolite Joinery is a range of wood casement windows and doors which sets out to supply every kind of user from the speculative builder with his five-light circular bay to the County Architect with his horizontal pivot hung. Alternatively, it might be described as a system of detailing which shows cill, head, wall stud, mullion and transom of constant section and which confines sectional variation to the window

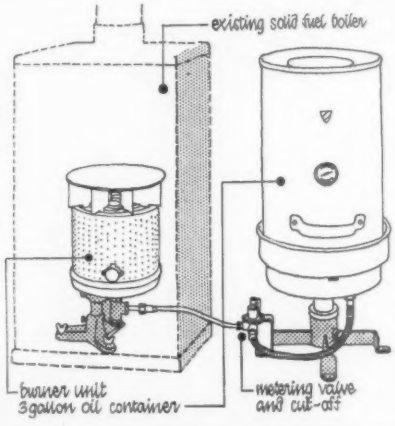


itself and to an inner frame. This produces a sturdy result and allows wide variation in dimension and use at reasonable cost, though designers may find that the resulting detailing is too heavy for some purposes.

H. C. Janes Ltd., 183, High Town Rd., Luton.

OIL FIRED BURNERS

The article in the July issue of the AR on 'Domestic Oil Burning Equipment' was confined to equipment burning Class 'A' oil. It did not discuss paraffin burners because at that time these were virtually confined to the humble portable type. For some time, however, the Valor Company has been developing a paraffin conversion unit which has been on sale in the Birmingham and Croydon areas during the past year and is now being marketed nationally. The unit is produced in two sizes with outputs of 25,000 and 50,000 BThU's per hour respectively, and comprises two parts: a burner which is designed to fit inside most makes of solid fuel boiler and a 3-gallon container which rests on a stand at the side of the boiler and which passes paraffin by gravity to the burner. These burners use a relatively expensive grade of oil, but the cost of the equipment is of a much lower order than Class 'A' oil burners. The price of the 25,000 BThU model is £11 15s. 0d., and of the 50,000 BThU model £13 5s. 0d. To this must be added a small installation charge.



The Valor Co., Ltd., Bromford, Erdington, Birmingham.

GLASS CLADDING

Whether or not we like the polished black glass of the Daily Express building and the vitrolite shop fascias of the 'thirties, we cannot question their wearing quality. The chief objection heretofore to using

[continued on page 420

IN PREPARATION —
OUR NEW WALLPAPER PATTERN BOOKS
NEW IDEAS
NEW DESIGNS
NEW TEXTURES
NEW COLOURINGS
JOHN LINE & SONS LTD
WALLPAPERS · PAINTS · DECORATORS' MATERIALS
213-216 TOTTENHAM COURT ROAD · LONDON · W 1

By appointment
to Her Majesty Queen Elizabeth II
Manufacturers of Kitchen Equipment

Designed for Quicker Service

Brighton Station Refreshment Rooms. Contractors: Messrs. Gates & Sons (Builders – Shopfitters) Ltd., 1, North Road, Brighton.

A complete self-service counter has been installed for the British Transport Hotels and Catering Services at Brighton Station refreshment rooms (see photograph). The counter contains a tea and coffee service unit, consisting of a 4-gallon coffee machine, two 2-gallon milk urns and a recessed tea pot warmer. Also provided are a gas heated service top hot closet, rack storage and cold sections and a stainless steel waitress tray shelf. In order to economise on floor space, the countering shown was designed in collaboration with the Architects.

W. M. STILL & SONS LIMITED

Manufacturing Engineers for over 80 years

REGISTERED OFFICE:

29-31 GREVILLE STREET, LONDON, E.C.1. Telephone: HOLborn 3744

BRISTOL 66-68 Gloucester Road North, Filton, Bristol 7. Filton 2709

BRANCH OFFICES: MANCHESTER 14 Cathedral St., Corn Exchange Buildings, Manchester. Blackfriars 5778

GLASGOW 136 Renfield Street, Glasgow, C.2. Douglas 0444

AP 243.91

continued from page 418]

glass cladding has been that the glass itself is too expensive and that there is no guarantee of permanence for the colour which must be used on the backing. The first of these objections is diminished and the second overcome by Messrs. Pilkington's 'Muroglass.' This is a ¼-inch glass which may be either rough cast or wired, and which is made, as yet, in six colours, with two more promised and with the assurance that the architect has a good chance of obtaining a colour of his choice for quantities of not less than 10,000 square feet. 'Muroglass' is made in one operation, by applying a film of vitreous enamel to the main sheet while it is being fired, which results in a single piece of glass with a thin skin of opaque coloured glass on one side. The finished product sells for 3s. 6d. to 4s. per sq. ft. and may be obtained in widths up to 48 in. and lengths up to 100 in.

Pilkington Bros. Ltd., St. Helens, Lancs.

CONTRACTORS etc

House in Yorkshire. *Architect:* Peter Womersley. *General contractors:* Law Stead & Sons. *Sub-contractors: Pre-cast concrete floor:* John Cooke & Sons. *Asphalter and roofer:* Northern Asphalt & Roofing Works Co. *Carpenter and joiner:* Taylor & Hobson Ltd. *Steel and ironwork:* S. S. Thompson & Son. *Plaster and partitions:* W. E. Jowitt Ltd. *Glazier and plumber:* H. C. Stringer. *Heating and hot water:* Hayes Heating & Steam Services Ltd. *Electric lighting and power:* T. W. Broadbent Ltd.

House at Leicester. *Architects:* James Cubitt & Partners. *General contractors:* A. E. Cox & Co. (Builders). *Sub-contractors: Facing bricks:* Fisons Ltd. *Roofing joists:* Benfix Ltd. *Roofing slabs:* Thermacoust Ltd. *Heating installation:* Haden & Sons. *Woodblock floors:* Horseley Smith & Sons. *Linoleum:* Cellulin Flooring Co. *Metal windows:* The Crittall Mfg. Co. *Glazing:* Pilkington Bros., and Plyglass Ltd. *Electrical:* C. N. Rogers. *Door furniture:* Alfred G. Roberts Ltd. *Sliding door gear:* A. Hill Aldam & Co. *Slate shelves:* C. Collins & Sons. *Sanitary fittings:* Stitson Sanitary Fittings. *Slate cills:* Hall & Co. (Brentford). *Kitchen roof-light:* T. & W. Ide. *Kitchen fittings, cupboards and cooker hood:* Ezee Kitchens Ltd. *Fittings and furniture:* Andrew Pegram. *Wall tiling:* Carter & Co. (London). *Veneers:* Mallinson & Sons. *Fireplace surround:* Wessex Guild. *Light fittings:* Troughton & Young (Lighting) Ltd.; George Forrest & Co.; Merchant Adventurers of London Ltd.; Finmar Ltd.; W. D. Developments. *Furniture:* Finmar Ltd.; Hille of London Ltd.; Conran Furniture. *Materials and soft furnishings:* Primavera Ltd. *Shelf fittings:* Church & Co. (Fittings).

Bank in Garrick Street, W.C.2. *Architect:* Sir Hugh Casson. *Associate architect:* R. A. Green. *Contractors:* Mullen & Lumsden Ltd. *Sub-contractors: Glass:* John M. Newton & Sons Ltd. *Patent flooring:* Korkoid Decorative Floors Ltd. *Central heating:* G. N. Haden & Sons. *Gasfitting:* North Thames Gas Board. *Boilers:* Thomas de la Rue Ltd. (Gas Division). *Electric wiring:* S. Goodchild. *Electric light fixtures:* Merchant Adventurers of London Ltd. *Electric heating:* Ferranti Ltd. *Sanitary fittings:* W. N. Froy & Sons. *Door furniture:* Comyn Ching & Co., and Alfred G. Roberts Ltd. *Bronze windows:* Williams & Williams Ltd. *Venetian blinds:* Catesbys Contracts Ltd.

Squash Court at Oxford. *Architect:* Stephen Gardiner. *Contractors:* Hinkins & Frewin, Ltd. *Sub-contractors: Flooring:* Hollis Bros. Ltd. *Ironmongery:* James Gibbons Ltd. *Paints:* International Paints Ltd., and Parson & Sons. *Roofing felt:* Neuchatel Asphalte Co.

Showroom in Hackney Road, E.2. *Showroom designer:* Clive Latimer. *Mural by:* Nigel Henderson. *Main showroom contractor:* E. Pollard & Co. *Preparation and fixing of exhibits:* Andrew A. Pegram, Ltd. *Electrical installation:* Barlow Bros. & Co.

Advertisement

STAFF APPOINTMENT

An appointment is offered to a young Architect or Surveyor, with general London experience, who is anxious to obtain a senior post of a permanent nature, which carries with it considerable responsibility, and which calls for energy and resourcefulness. The work may involve some travel in the provinces, and office accommodation with every modern convenience will be provided. Salary range £750 to £1,000. Box No. 5036.

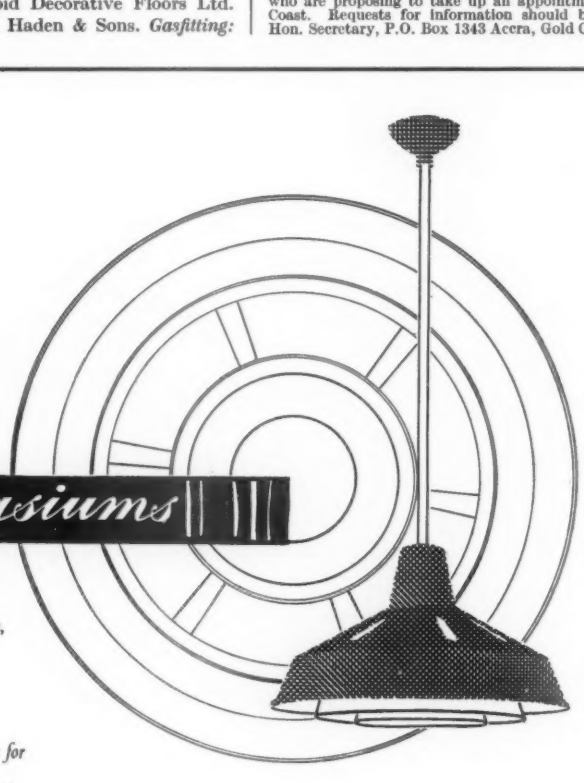
Notice

GOLD COAST SOCIETY OF ARCHITECTS

One of the functions of the Gold Coast Society of Architects is to provide information on local conditions to Architects who are proposing to take up an appointment in the Gold Coast. Requests for information should be made to the Hon. Secretary, P.O. Box 1343 Accra, Gold Coast.

The fitting illustrated is a standard P41 Pendant comprising stove enamelled reflector with slots for upward lighting and concentric louvres, as supplied to Chaddesden Secondary Modern School.

Architect:—Architects' Co-Partnership



lighting for gymnasiums

Hume Atkins can advise on lighting schemes and prepare proposals and estimates, including the preparation of special designs in appropriate styles.

A wide range of commercial lighting fittings for tungsten and fluorescent lamps is also available

by Hume Atkins

Hume Atkins & Co. Ltd., 66, Victoria Street, London, S.W.1. Tel.: VICtoria 0161 • New Icknield Way, Letchworth, Tel.: Letchworth 2611/2

VOLUME ONE HUNDRED AND EIGHTEEN JULY-DECEMBER 1955

ARTICLES AND ILLUSTRATIONS

PAGE

Airport, London. South East Passenger Handling Building and Control Building. *Architect:* Frederick Gibberd. Exterior and interior views, drawings and plans 4, 13–15, 333–340
Airports (Arrival and Departure). *Illustrated article by* Lionel Brett 4–16
Amsterdam Air Terminal. *Architects:* Joh. H. Groenewegen *and* H. Mieras. Exterior and interior views 16
Architect/Manufacturer Co-operation: III (Techniques). *Illustrated article by* Noel Moffett 201–204
Architect/Manufacturer Co-operation: IV (Techniques). *Illustrated article by* Noel Moffett 412–416
Architectural Free-thinking (History). *Illustrated note by* Ian Nairn 394–395
Architecture at the RA. *Note by* J. M. Richards 49
Arrival and Departure. *Illustrated article by* Lionel Brett 4–16
Art in Use: Saddle-Slide. Illustrated note 122
Art Nouveau, Blake and. *Illustrated article by* Robert Schmutzler 90–97
Assembly Hall, Rangoon University (Project). *Architects:* Raglan Squire and Partners. Exterior views, models and plans 318–321
Automatic Controls (The Industry). Illustrated note 136

Bad Language at Shepton Mallet (Outrage). *Illustrated note by* Ian Nairn 329–330
Bank, London, Garrick Street, W.C.2, Martins. *Architect:* Sir Hugh Casson. Exterior and interior views and plan 403–405
Bar, Grosvenor House, London, Park Lane. *Designer:* R. D. Russell. Interior views and plans 55–57
Bar, Midland Hotel, Manchester. *Designer:* John Carter. Interior views and plan 57–58
Barnet, Sports Pavilion. *Architect:* D. H. Gillies-Reyburn. Exterior view and plan 48
Bewdley, Worcestershire, School. *Architects:* Yorke, Rosenberg and Mardall. Exterior and interior views and plan 255–256
Blake and Art Nouveau. *Illustrated article by* Robert Schmutzler 90–97

Book Reviews

Auerbach Erna. Tudor Artists. *Reviewed by* John Summerson 193
Berger, Franz. Das Funkhaus in Köln 123
Blunt, Anthony. Art and Architecture in France, 1500–1700. *Reviewed by* Reyner Banham 194
Colvin, H. M. A Biographical Dictionary of English Architects 1660–1840. *Reviewed by* Marcus Whiffen 259

PAGE

de Maré, Eric. New Ways of Servicing Buildings. *Reviewed by* Dex Harrison 194
Dorfles, Gillo. L'Architettura Moderna. *Reviewed by* Reyner Banham 193
Entwistle, E. A. The Book of Wallpaper 132
Harvey, John. English Mediaeval Architects: A Biographical Dictionary Down to 1550. *Reviewed by* Nikolaus Pevsner 259
Hitchcock, Henry-Russell. Early Victorian Architecture in Britain. *Reviewed by* Peter Floud 331
Hoskins, W. G. Devon. *Reviewed by* Ian Nairn 193
Hume, Bertrand. Form and Reform in Architecture 49
Kocher, A. Lawrence and Howard Dearstyne. Shadows in Silver: A Record of Virginia 1850–1900. *Reviewed by* Marcus Whiffen 402
Le Corbusier: Oeuvre Complète. Vol. 5. 1946–1952. *Reviewed by* Ian McCallum 50
McQuoid, Percy and Ralph Edwards. Antique Furniture. *Reviewed by* Barbara Jones 122
Symonds, R. W. Furniture Making in Seventeenth and Eighteenth Century England. *Reviewed by* John Gloag 332
Summerson, John. Architecture in Britain, 1530–1830. *Reviewed by* Reyner Banham 194
Whistler, Laurence. The Imagination of Vanbrugh and His Fellow Artists. *Reviewed by* Marcus Whiffen 331
Woodforde, Christopher. English Stained and Painted Glass. *Reviewed by* Alec Clifton-Taylor 124
Wright, Frank Lloyd. The Future of Architecture. *Reviewed by* Alan Colquhoun 401
Zevi, Bruno. Poetica dell'Architettura Neo-Plastica. *Reviewed by* Reyner Banham 193

Books Reviewed

Antique Furniture. *By* Percy McQuoid *and* Ralph Edwards 122
Architecture in Britain, 1530–1830. *By* John Summerson 194
L'Architettura Moderna. *By* Gillo Dorfles 193
Art and Architecture in France, 1500–1700. *By* Anthony Blunt 194
Biographical Dictionary of English Architects, 1660–1840. *By* Howard Colvin 259
Book of Wallpaper, The. *By* E. A. Entwistle 132
Devon. *By* W. G. Hoskins 193
Early Victorian Architecture in Britain. *By* Henry-Russell Hitchcock 331

PAGE

English Mediaeval Architects: A Biographical Dictionary Down to 1550. *By* John Harvey 259
English Stained and Painted Glass. *By* Christopher Woodforde 124
Form and Reform in Architecture. *By* Bertrand Hume 49
Funkhaus in Köln, Das. *By* Franz Berger 123
Furniture Making in Seventeenth and Eighteenth Century England. *By* R. W. Symonds 332
Future of Architecture, The. *By* Frank Lloyd Wright 401
Imagination of Vanbrugh and His Fellow Artists. *By* Laurence Whistler 331
Le Corbusier: Oeuvre Complète, 1946–1952 50
New Ways of Servicing Buildings. *By* Eric de Maré 194
Poetica dell'Architettura Neo-Plastica. *By* Bruno Zevi 193
Shadows in Silver: A Record of Virginia, 1850–1900. *By* A. Lawrence Kocher and Howard Dearstyne 402
Tudor Artists. *By* Erna Auerbach 193
Brewers' House Styles. *Illustrated article by* Brian Spiller 372–381
Brighton Housing (Outrage). *Illustrated note by* Ian Nairn 261–262
Brutalism, The New. *Illustrated article by* Reyner Banham 355–361
Building Block, A New (The Industry). Note 134
Building Exhibition (Techniques). *Illustrated article by* John Voelcker 342–346

Cane Furniture (Design Review). Illustrated note 340–341
Cape Town, Government Avenue (Townscape). Illustrated note 330–331
Carpet Laying (The Industry). Illustrated note 276
Caruso, Bruno: The Drawings of. *Illustrated note by* Robert Melville 325–327
Chaddesden, Derbyshire, School. *Architects:* Architects' Co-Partnership. Exterior and interior views and plans 21–24
Chapel, Ronchamp, Notre Dame du Haut. *Architect:* Le Corbusier. Exterior views 354
Chessington, Surrey, Church Hall. *Architects:* Kenneth Wood. Exterior views and plan 257
Chesterton, Warwickshire (History). *Illustrated article by* Howard Colvin 115–117
Church, Sidley, Sussex. *Architect:* A. F. Watson. Exterior and interior views and plan 48
Church Furnishings, German (Design Review). *Illustrated note by* Nikolaus Pevsner 270–273
Church Hall, Chessington, Surrey. *Architect:* Kenneth Wood. Exterior views and plan 257
Cladding, Glass (The Industry). Note 418
Cladding, Kynalok Secret Fix (The Industry). Illustrated note 276

index

PAGE

Coffee Bars. *Illustrated article by* Stephen Gardiner 167–173
College, Pershore, Horticultural. *Architects :* Richard Sheppard and Partners. Exterior and interior views and plans 301–303
Colour Range, Architects' (The Industry). Note 66
Copenhagen, US Embassy Office. *Architect :* Ides van der Gracht (Regional Director, USFBO). Exterior and interior views and plans 241–242
Corner Chamfer, The. *Note by* Hugh Casson 191
Correspondence :
- Ames, Winslow (Corner Chamfers) 352
- Arkin, James (Outrage) 212
- Halprin, Lawrence (Outrage) 212
- Laws, P. G. (Outrage) 352
- Metcalf, Priscilla (Rebuilding the City) 212
- Plowman, Harry (Oxford Gas Works) 141
- Slipher, David C. (Outrage) 212
- Thomas, P. Michael (Outrage and Lamp Standards) 142

Coventry, Hotel Leofric. *Architects :* W. S. Hattrell and Partners. Exterior and interior views and plans 195–199

Covers
- July : Architectural Review's Initial Letters Cut in Stone
- August : Patio of House in Hampstead Interpolated as one of the Squares in Floorscape of Patio of House at Santa Fe
- September : Detail from Medal by Matteo de'Pasti and Four Buildings by Leone Battista Alberti
- October : Notice of Acquisition of Open Downland for Housing by Brighton Corporation
- November : Wall of the Crêche on Roof of Le Corbusier's Flats at Nantes-Rezé
- December : Registered Trade Mark No. 1—the Red Badge of Bass

Crawley New Town, Shopping Precinct, Broad Walk. *Architect :* H. S. Howgrave-Graham. Exterior views and sketch 106, 108
Cricket Pavilion, East Molesey. *Architect :* Basil Ward. Exterior and interior views and plans 219–221
Criticism : Garches to Jaoul : Le Corbusier as Domestic Architect in 1927 and 1953. *Illustrated article by* James Stirling 145–151
Curtain Walling (The Industry). Illustrated note 134

Dartford, Kent, Technical College. *Architect :* E. T. Ashley Smith (Kent County Architect). Exterior and interior views and plans 186–187
Dereliction (Landscape). *Illustrated article by* Kenneth Browne 304–311
Dereliction. *Note by* Hugh Casson 393–394
Design Review :
- Book of Wallpaper. Illustrated note 132
- Cane Furniture. Illustrated note 340–341
- Crown Wallpapers. *Illustrated note by* Diana Rowntree 199–200
- Form in Glass (Light Fittings). *Illustrated note by* Diana Rowntree 411
- French Furniture at Woollands. Illustrated note 59–60
- Furnishing Fabrics. Illustrated note 200
- German Church Furnishings. *Illustrated note by* Nikolaus Pevsner 270–273
- Italian Furniture at Heals. *Illustrated note by* Diana Rowntree 58–59
- Knoll Index. *Illustrated note by* Diana Rowntree 129–130
- Liberty's Furnishing Fabrics. *Illustrated note by* Diana Rowntree 130–131
- Plastic Furnishing Fabrics. Illustrated note 131
- Wall Coverings. Illustrated note 342
- Wallpapers. Illustrated note 411

Diapers (Wallscape). *Illustrated note by* C. Forehoe 396
Domestic Oil Burning Equipment (Techniques). *Illustrated article by* John Voelcker 60–66
Door Furniture (The Industry). Illustrated note 206
Drawings of Bruno Caruso. *Illustrated note by* Robert Melville 325–327

East Molesey, Cricket Pavilion. *Architect :* Basil Ward. Exterior and interior views and plans 219–221
Embassy Apartments, Paris, US. *Architect :* Alan B. Jacobs. Exterior and interior views and plans 246–247
Embassy Offices, Copenhagen, US. *Architect :* Ides van der Gracht (Regional Director, USFBO). Exterior and interior views and plans 241–242
Embassy Offices, Stockholm, US. *Architect :* Ides van der Gracht. Exterior and interior views and plans 243–245
Encroachment (Landscape). *Illustrated article by* Sylvia Crowe 248–254
Esher, House. *Architects :* Devereux and Davies. Exterior and interior views and plans 322
Espresso. *Article by* Marghanita Laski 165–167
Exhibition, Building (Techniques). *Illustrated article by* John Voelcker 342–346
Exhibition, Hälsingborg, Sweden, H.55 Exterior views 74
Exhibition, Hälsingborg, Sweden, H.55. *Illustrated article by* J. M. Richards 222–236
Exhibition at ICA : Man, Machine and Motion. Illustrated note 51–53
Exhibition Stand, Utrecht Textile Fair. Illustrated note 395
Exhibitions. *Illustrated note by* Robert Melville 50, 118, 189, 262, 325, 396

Factory, Harlow New Town. *Architects :* Harlow Development Corporation. Exterior views and plan 114
Factory, Norwich (Architectural Free-Thinking). *Illustrated note by* Ian Nairn 394–395
Factory, Stevenage New Town. *Architects :* Stevenage Development Corporation. Exterior and interior views and plan 45, 46
Farnley Tyas, Yorkshire, House near. *Architect :* Peter Womersley. Exterior and interior views and plans 362–367
Flats, London, Hampstead, Isokon (History). *Illustrated note by* Reyner Banham 54
Flats, Nantes-Rezé. L'Unité d'Habitation. *Architect :* Le Corbusier. Exterior and interior views. Illustrated note 327–329
Flats, Rome. *Architects :* Luccichenti and Monaco. Exterior views and plans 385–387
Flats, Santa Marinella, Italy. *Architects :* Luccichenti and Monaco. Exterior views and plan 386
Flaxman : The Bi-Centenary of an English Neo-Classicist. *Illustrated article by* F. J. B. Watson 285–289
Form in Glass (Design Review). *Illustrated note by* Diana Rowntree 411
French Furniture at Woollands (Design Review). *Illustrated note by* Diana Rowntree 59–60
Furnishing Fabrics (Design Review). Illustrated note 200
Furnishing Fabrics, Liberty's (Design Review). *Illustrated note by* Diana Rowntree 130–131
Furnishing Fabrics, Plastic (Design Review). Illustrated note 131
Furniture at Heals, Italian (Design Review). *Illustrated note by* Diana Rowntree 58–59
Furniture at Woollands, French (Design Review). Illustrated note 59–60
Furniture, Cane (Design Review). Illustrated note 340–341
Furniture : Knoll Index (Design Review). *Illustrated note by* Diana Rowntree 129–130

Galleria, The (Townscape). *Illustrated note by* J. M. Richards 260
Garches to Jaoul : Le Corbusier as Domestic Architect in 1927 and 1953. *Illustrated article by* James Stirling 145–151
Garston, Watford, School. *Architect :* C. H. Aslin. Exterior and interior views and plan 111, 112
German Church Furnishings (Design Review). *Illustrated note by* Nikolaus Pevsner 270–273
Glass Cladding (The Industry). Note 418
Great Hall, The. Illustrated note 120–122

Hälsingborg, Sweden, Exhibition : H.55. Exterior views 74
Hälsingborg, Sweden, Exhibition : H.55. *Illustrated article by* J. M. Richards 222–236
Hardec (The Industry). Note 348
Harlow New Town, Factory. *Architects :* Harlow Development Corporation. Exterior view and plan 114
Harlow New Town, School. *Architect :* H. T. Cadbury-Brown. Exterior views and plan 98–100
Hatfield, School. *Architects :* Architects' Co-Partnership. Exterior and interior views and plans 27–29
Hawksmoor and the Ordnance. *Illustrated article by* Laurence Whistler 237–239
Heating Tests, Two (Techniques). *Illustrated note by* John Arkwright 132–134
History :
- Architectural Free-Thinking (Factory in Norwich). *Illustrated note by* Ian Nairn 394–395
- Chesterton House, Warwickshire. *Illustrated article by* Howard Colvin 115–117
- Great Georgian Warehouse, A (West India Dock, London). *Illustrated note by* S. H. Kessels 191–192
- Isokon Flats (London, Hampstead). *Illustrated note by* Reyner Banham 54
- Old Prison in Lincoln Castle. *Illustrated note by* Emily Peckover 264

Hogarth, Paul. *Illustrated article by* Robert Melville 75–79
Holland, Amsterdam Air Terminal. *Architects :* Joh. H. Groenewegen and H. Mieras. Exterior and interior views 16
Holland, Rotterdam, Lijnbaan Shopping Centre. *Architects :* J. H. van den Broek and J. B. Bakema. Exterior views and sketch 110
Hornsey, School. *Architects :* Richard Sheppard and Partners. Exterior and interior views and plans 101–105

index

PAGE

Horta : Works and Style of Victor Horta Before 1900. *Illustrated article by* Stephan Tschudi Madsen 388–392
Horticultural College, Pershore. *Architects :* Richard Sheppard and Partners. Exterior and interior views and plans 301–303
Hotel, Coventry, Leofric. *Architects :* W. S. Hattrell and Partners. Exterior and interior views and plans 195–199
Hotel, Istanbul, Hilton. *Architects :* Skidmore, Owings and Merrill. Exterior and interior views and plans 290–296
Houses :
- Esher. *Architects :* Devereux and Davies. Exterior and interior views and plan 322
- Farnley Tyas, Yorkshire. *Architect :* Peter Womersley. Exterior and interior views and plans 362–367
- Leicester. *Architects :* James Cubitt and Partners. Exterior and interior views and plans 368–371
- London, Hampstead. *Architect :* Alexander Gibson. Exterior and interior views and plan 86–89
- Santa Fe, New Mexico, USA. *Architect :* Alexander Girard. Exterior and interior views and plan 80–86
- Tewin, Hertfordshire. *Architect :* Vernon H. Lee. Exterior view and plan 258
- Totteridge, Hertfordshire. *Architects :* Greenwood and Michell. Exterior view and plan 47
- West Mersea, Essex. *Architect :* Richard Finch. Exterior views and plan 188

Housing, Brighton (Outrage). *Illustrated note by* Ian Nairn 261–262
Housing, London, Highgate, Police. *Architect :* J. Innes Elliott (Chief Architect, Metropolitan Police). Exterior views and plan 112–113
Hydrophobic Report (Landscape). *Illustrated note by* Eric de Maré 119–120

Imperial Institute Re-created as a University Centre (Townscape). *Illustrated article by* Gordon Cullen 30–35
Industry, The :
- Architect's Colour Range. Note 66
- Automatic Controls. Illustrated note 136
- Building Block, A New. Note 134
- Carpet Laying. Illustrated note 276
- Curtain Walling. Illustrated note 134
- Door Furniture. Illustrated note 206
- Glass Cladding. Note 418
- Hardee (Patent Hardboard). Note 348
- Kynalok Secret Fix Cladding. Illustrated note 276
- Light Fitting, A Pendant. Illustrated note 136
- Lighting Fittings, Recessed. Illustrated note 66
- Mod-X Structures. Note 204
- Oil Fired Burners. Illustrated note 418
- Pre-cast Walling Units. Note 206
- Space Heating System. Illustrated note 206
- Tiles, More. Illustrated note 204
- Timber Impregnation. Note 208
- Wood Casements. Illustrated note 418

Interiors :
- Bar at Grosvenor House, Park Lane, W.1. *Designer :* R. D. Russell. Interior views and plans 55–57
- Bar at Midland Hotel, Manchester. *Designer :* John Carter. Interior views and plan 57–58

PAGE

- Hotel at Coventry. *Architects :* W. S. Hattrell and Partners. Exterior and interior views and plans 195–199
- London Airport, South East Passenger Handling Building. *Architect :* Frederick Gibberd. Interior views and plans 333–340
- Office in Copthall Avenue, E.C.2. *Architects :* Farmer and Dark. Interior views and plan 128–129
- Offices in Aldford Street, W.1. *Designer :* R. D. Russell. Interior views and plans 125–126
- Offices in Manchester. *Architect :* Alan Buckley. Interior views and plan 268–270
- Offices in Park Lane, W.1. *Designers :* Peter Miller and F. H. K. Henrion. Interior views and plan 126–128
- Showrooms in Bond Street, W.1. *Architects :* O. Gundlach-Pedersen and Ebbe Andresen. Interior views and plan 410
- Showrooms in Grafton Street, W.1. *Architect :* Roy L. Moorcroft. Interior views and plan 267–268
- Showrooms in Hackney Road, E.2. *Designer :* Clive Latimer. Interior views and plan 407–408
- Showrooms in Victoria Street, S.W.1. Army and Navy Stores. *Designer :* Misha Black. Interior views and plan 409
- Tailor's Showroom, Regent Street, Austin Reed. *Architects :* Westwood, Sons and Harrison. Interior views and plans 265–267

Isokon Flats, London, Hampstead (History). *Illustrated note by* Reyner Banham 54
Istanbul, Hilton Hotel. *Architects :* Skidmore, Owings and Merrill. Exterior and interior views and plans 290–296
Italian Furniture at Heal's (Design Review). *Illustrated note by* Diana Rowntree 58–59

Knoll Index (Design Review). *Illustrated note by* Diana Rowntree 129–130
Kynalok Secret Fix Cladding (The Industry). Illustrated note 276

Laboratories, Rangoon (Project). *Architects :* James Cubitt and Partners. Exterior views, models and plans 312–317
Laboratories, Richmond, Surrey. *Architect :* Kenneth Anns. Exterior views 47
Landscape :
- Dereliction. *Illustrated article by* Kenneth Browne 304–311
- Encroachment. *Illustrated article by* Sylvia Crowe and Kenneth Browne 248–254
- Hydrophobic Report. *Illustrated note by* Eric de Maré 119–120
- Recreational Landscape. *Illustrated note by* Sylvia Crowe 190
- Roads in the Landscape. *Illustrated note by* Sylvia Crowe 53–54

Le Corbusier as Domestic Architect in 1927 and 1953 (Garches to Jaoul). *Illustrated article by* James Stirling 145–151
Leicester, House. *Architects :* James Cubitt and Partners. Exterior and interior views and plans 368–371
Lettering : Minuscule. *Illustrated note by* Nicolete Gray 398–400
Liberty's Furnishing Fabrics (Design Review). *Illustrated note by* Diana Rowntree 130–131

PAGE

Light Fitting, A Pendant (The Industry). Illustrated note 136
Light Fittings : Form in Glass (Design Review). *Illustrated note by* Diana Rowntree 411
Light Fittings, Recessed (The Industry). Illustrated note 66
Lincoln Castle, The Old Prison in (History). *Illustrated note by* Emily Peckover 264
London Airport, South East Passenger Handling Building and Control Building. *Architect :* Frederick Gibberd. Exterior and interior views, drawings and plans 4, 13–15, 333–340
London :
- Aldford Street, W.1, Offices. *Designer :* R. D. Russell. Interior views and plans 125–126
- Bond Street, W.1, Showrooms for Georg Jensen. *Architects :* O. Gundlach-Pedersen and Ebbe Andresen. Interior views and plan 410
- Catford, S.E.6, School. *Architect :* J. L. Martin. Exterior and interior views and plans 323–324
- Chelsea, King's Road, Orrery Coffee Bar. *Designer :* Terence Conran. Interior views and plan 173
- Chelsea, King's Road, Roy's Bar. *Designer :* Roy Alderson. Interior views and plan 169
- Copthall Avenue, E.C.2, Office. *Architects :* Farmer and Dark. Interior views and plan 128–129
- Garrick Street, W.C.2, Martins Bank. *Architect :* Hugh Casson. Exterior and interior views and plan 403–405
- Grafton Street, W.1, Showroom. *Architect :* Roy L. Moorcroft. Interior views and plan 267–268
- Hackney Road, E.2, Showrooms. *Designer :* Clive Latimer. Interior views and plan 407–408
- Hampstead, Flats (History). *Illustrated note by* Reyner Banham 54
- Hampstead, House. *Architect :* Alexander Gibson. Exterior and interior views and plan 86–89
- Haymarket, The Coffee House. *Designer :* Antoine Acket. Interior views and plan 172
- Highgate, Police Housing. *Architect:* J. Innes Elliott. Exterior views and plan 112–113
- Imperial Institute Recreated as a University Centre (Townscape). *Illustrated article by* Gordon Cullen 30–35
- Kensington, Brompton Road, Arabica Coffee Bar. *Designer :* G. R. Cole. Interior view and plan 171
- Kensington, Brompton Road, El Cubano Coffee Bar. *Designer :* Douglas Fisher. Interior views and plan 170
- Kensington, Old Brompton Road. Las Vegas Coffee Bar. *Designer :* Jack Williams. Interior view and plan 172
- Kensington, Onslow Crescent, Sarabia Coffee Bar. *Designer :* G. A. Crockett. Interior view and plan 171
- Knightsbridge, Mocamba Coffee Bar. *Designer :* Douglas Fisher. Interior view and plan 173
- Paddington, Hallfield Estate School. *Architects :* Drake and Lasdun. Exterior and interior views and plans 152–160

index

PAGE

Park Lane, Grosvenor House Bar. *Designer :* R. D. Russell. Interior views and plans 55–57
Park Lane, Offices. *Designers :* Peter Miller and F. H. K. Henrion. Interior views and plan 126–128
Regent Street, Austin Reed Tailor's Showroom. *Architects :* Westwood, Sons and Harrison. Interior views and plans 265–267
Victoria Street, S.W.1, Showrooms for Army and Navy Stores. *Designer :* Misha Black. Interior views and plan 409
West India Dock, A Great Georgian Warehouse (History). *Illustrated note by* S. H. Kessels 191–192
Wigmore Street, W.1, Boulevard Coffee Bar. *Designer :* William Andrews. Interior views and plan 171
Wigmore Street, W.1, Gondola Coffee Bar. *Designers :* Helen Low and Humphrey Spender. Interior views and plan 170
Lost Axis, The : The Imperial Institute Recreated as a University Centre (Townscape). *Illustrated article by* Gordon Cullen 30–35
Lubetkin (Biography). *Illustrated article by* R. Furneaux Jordan 36–44

Mackintosh, No Grace for. *Note by* Nikolaus Pevsner 117
Man, Machine and Motion. Illustrated note 51–53
Manchester, Midland Hotel Bar. *Designer :* John Carter. Interior views and plan 57–58
Manchester, Offices. *Architect :* Alan Buckley. Interior views and plan 268–270
Metropolitan Promenade (Townscape). Illustrated note 330–331
Minuscule (Lettering). *Illustrated note by* Nicolete Gray 398–400
Mod-X Structures (The Industry). Note 204

Nantes-Rezé, L'Unité d'Habitation. *Architect :* Le Corbusier. Exterior and interior views 327–329
New Brutalism, The. *Illustrated article by* Reyner Banham 355–361
New Patrons, The. *Article by* J. M. Richards 215–218
North African Scrapbook. *Illustrated article by* G. E. Kidder Smith 144, 174–185

Offices :
London, Aldford Street, W.1. *Designer :* R. D. Russell. Interior views and plans 125–126
London, Copthall Avenue, E.C.2. *Architects :* Farmer and Dark. Interior views and plan 128–129
London, Park Lane, W.1. *Designers :* Peter Miller and F. H. K. Henrion. Interior views and plan 126–128
Manchester. *Architect :* Alan Buckley. Interior views and plan 268–270
Rome, Via Gianturco. *Architects :* Luccichenti and Monaco. Exterior and interior views and plans 382–384
Oil Fired Burners (The Industry). Illustrated note 418
Ordnance, Hawksmoor and the. *Illustrated article by* Laurence Whistler 237–239
Outrage : Bad Language at Shepton Mallet. *Illustrated note by* Ian Nairn 329–330

PAGE

Outrage : Brighton Housing. *Illustrated note by* Ian Nairn 261–262
Oxford, Squash Court at. *Architect :* Stephen Gardiner. Exterior and interior views and plans 405–406

Palladian Villas as Rural Centres. *Illustrated article by* Georgina Masson 17–20
Panel, The (Techniques). *Illustrated note by* John Norgate 273–274
Paris, US Embassy Apartments. *Architect :* Alan B. Jacobs. Exterior and interior views and plans 246–247
Peepshow and Roving Eye. *Illustrated article by* Roger Hinks 161–164
Peking, The Temple of Heaven (Landscape). *Illustrated note by* Hugh Casson 400–401
Pershore, Horticultural College. *Architects :* Richard Sheppard and Partners. Exterior and interior views and plans 301–303
Philadelphia Airport, USA. *Architects :* Garroll, Grisdale and Van Alen. Exterior and interior views 12–13
Plastic Furnishing Fabrics (Design Review). Illustrated note 131
Play Sculpture : Saddle-Slide. Illustrated note 122
Police Housing, London, Highgate. *Architect :* J. Innes Elliott. Exterior views and plan 112–113
Portraits :
Flaxman, John 289
Gibson, Alexander 72
Girard, Alexander 72
Hälsingborg Exhibition, Architects and Organizers of the 212
Luccichenti and Monaco 352
Squire, Raglan 282
Womersley, Peter 352
Prefabrication : Mod-X Structures (The Industry). Note 204
Prison in Lincoln Castle, The Old (History). *Illustrated note by* Emily Peckover 264
Public Houses (Brewers' House Styles). *Illustrated article by* Brian Spiller 372–381

Rangoon, Laboratories (Project). *Architects :* James Cubitt and Partners. Exterior views, models and plans 312–317
Rangoon University, Assembly Hall (Project). *Architects :* Raglan Squire and Partners. Models, exterior views and plans 318–321
Recreational Landscape. *Illustrated note by* Sylvia Crowe 190
Renfrew Airport. *Architects :* Rowand Anderson, Kininmonth and Paul. Interior and exterior views 11
Richmond, Surrey, Laboratories. *Architect :* Kenneth Anns. Exterior views 47
Roads in the Landscape. *Illustrated note by* Sylvia Crowe 53–54
Rome, Flats. *Architects :* Luccichenti and Monaco. Exterior views and plans 385–387
Rome, Offices. *Architects :* Luccichenti and Monaco. Exterior and interior views and plans 382–384
Ronchamp, France, Chapel of Notre Dame du Haut. *Architect :* Le Corbusier. Exterior views 354
Royal Academy, Architecture at the. *Note by* J. M. Richards 49

Saddle-Slide (Art in Use). Illustrated note 122

PAGE

Santa Fe, New Mexico, USA, House. *Architect :* Alexander Girard. Exterior and interior views and plans 80–86
Santa Marinella, Italy, Flats. *Architects :* Luccichenti and Monaco. Exterior views and plan 386
Schools :
Bewdley, Worcestershire. *Architects :* Yorke, Rosenberg and Mardall. Exterior and interior views and plan 255–256
Chaddesden, Derbyshire. *Architects :* Architects' Co-Partnership. Exterior and interior views and plans 21–24
Garston, Watford. *Architect :* C. H. Aslin. Exterior and interior views and plan 111–112
Harlow New Town. *Architect :* H. T. Cadbury-Brown. Exterior views and plan 98–100
Hatfield. *Architects :* Architects' Co-Partnership. Exterior and interior views and plans 27–29
Hornsey. *Architects :* Richard Sheppard and Partners. Exterior and interior views and plans 101–105
London, Catford, S.E.6. *Architect :* J. L. Martin. Exterior and interior views and plans 323–324
London, Paddington, Hallfield Estate. *Architects :* Drake and Lasdun. Exterior and interior views and plans 152–160
Sheffield, Yorkshire. *Architects :* Architects' Co-Partnership. Exterior and interior views and plans 24–26
Scrapbook, North African. *Illustrated article by* G. E. Kidder Smith 174–185
Sheffield, Yorkshire, School. *Architects :* Architects' Co-Partnership. Exterior and interior views and plans 24–26
Shepton Mallet, Bad Language at (Outrage). *Illustrated note by* Ian Nairn 329–330
Shop, London, Regent Street, Austin Reed Tailor's Showroom. *Architects:* Westwood, Sons and Harrison. Interior views and plans 265–267
Shopping Precincts (Townscape). *Illustrated article by* Charles Forehoe *and* Kenneth Browne 106–110
Showrooms :
London, Bond Street, W.1. *Architects :* O. Gundlach-Pedersen and Ebbe Andresen. Interior views and plan 410
London, Grafton Street, W.1. *Architect :* Roy L. Moorcroft. Interior views and plan 267–268
London, Hackney, E.2. *Designer :* Clive Latimer. Interior views and plan 407–408
London, Regent Street, W.1., Austin Reed Tailor's. *Architects :* Westwood, Sons and Harrison. Interior views and plans 265–267
London, Victoria Street, S.W.1, Army and Navy Stores. *Designer :* Misha Black. Interior views and plan 409
Sidley, Sussex, Church. *Architect :* A. F. Watson. Exterior and interior views and plan 48
Skill : Review of Building Techniques and Industrial Design 55–66, 125–136, 195–208, 265–278, 333–348, 407–420
Space Heating System (The Industry). Illustrated note 200

PAGE

Sports Pavilion, Barnet. *Architect:* D. H. Gillies-Reyburn. Exterior view and plan 48
Squash Court, Oxford. *Architect:* Stephen Gardiner. Exterior and interior views and plans 405–406
Stand at Utrecht Textile Fair. Illustrated note 395
Stevenage New Town, Factory. *Architects:* Stevenage Development Corporation. Exterior and interior views and plan 45, 46
Stockholm, US Embassy Offices. *Architect:* Ides van der Gracht. Exterior and interior views and plans 243–245
Sullivan and Wright: An Uneasy Union of Celts. *Illustrated article by* Grant Manson 297–300
Switzerland, Zurich Airport. *Architects:* A. and H. Oeschger. Exterior and interior views 9, 10

Technical College, Dartford, Kent. *Architect:* E. T. Ashley Smith (County Architect). Exterior and interior views and plans 186–187
Techniques:
- Architect/Manufacturer Co-operation III. *Illustrated article by* Noel Moffett 201–204
- Architect/Manufacturer Co-operation IV. *Illustrated article by* Noel Moffett 412–416
- Building Exhibition. *Illustrated article by* John Voelcker 342–346
- Domestic Oil Burning Equipment. *Illustrated article by* John Voelcker 60–66
- Heating Tests, Two. *Illustrated note by* John Arkwright 132–134
- Panel, The. *Illustrated note by* John Norgate 273–274

Temple of Heaven, The (Landscape). *Illustrated note by* Hugh Casson 400–401
Tewin, Hertfordshire, House. *Architect:* Vernon H. Lee. Exterior view and plan 258
Tiles, More (The Industry). Illustrated note 204
Timber Impregnation (The Industry). Note 208
Totteridge, Hertfordshire, House. *Architects:* Greenwood and Michell. Exterior view and plan 47
Townscape:
- Galleria, The. *Illustrated note by* J. M. Richards 260
- Lost Axis, The: The Imperial Institute Recreated as a University Centre. *Illustrated article by* Gordon Cullen 30–35
- Metropolitan Promenade. Illustrated note 330–331
- Shopping Precincts. *Illustrated article by* Charles Forehoe and Kenneth Browne 106–110

University, Rangoon, Assembly Hall (Project). *Architects:* Raglan Squire and Partners. Models, exterior views and plans 318–321
US Embassy Buildings 240–247
USA: Philadelphia Airport. *Architects:* Garroll, Grisdale and Van Alen. Exterior and interior views 12–13
USA: Santa Fé, New Mexico, House. *Architect:* Alexander Girard. Exterior and interior views and plan 80–86
Utrecht Textile Fair, Stand at. Illustrated note 395

PAGE

Vanderbijlpark, Transvaal, Shopping Centre. *Architect:* P. R. Anderson. Exterior views and sketch 109

Wall Coverings (Design Review). Illustrated note 342
Walling Units, Pre-Cast (The Industry). Note 206
Wallpaper, Book of (Design Review). Illustrated note 132
Wallpapers (Design Review). Illustrated note 411
Wallpapers, Crown (Design Review). *Illustrated note by* Diana Rowntree 199–200
Wallscape: Diapers. *Illustrated note by* C. Forehoe 396
Warehouse, A Great Georgian (History). *Illustrated note by* S. H. Kessels 191–192
West Mersea, Essex, House. *Architect:* Richard Finch. Exterior views and plan 188
Windows, Wood Casement (The Industry). Illustrated note 418
Wood Casements (The Industry). Illustrated note 418
Wright and Sullivan: An Uneasy Union of Celts. *Illustrated article by* Grant Manson 297–300

Zurich Airport. *Architects:* A. and H. Oeschger. Exterior and interior views 9, 10

ARCHITECTS AND ARTISTS

Acket, Antoine 172
Acking, Carl-Axel 222–236
Adler and Sullivan 297–300
Aerts, Hendrick 162
Alderson, Roy 169
Anderson, P. R. 109
Anderson, Rowand, Kinimonth and Paul 11
Andrews, William 171
Anns, Kenneth 47
Architects' Co-Partnership 21–29
Aslin, C. H. 111, 112
Ayrton, Michael 398
Bacon, Francis 189
Bakema, J. B., and J. H. van den Broek 110
Bärenreiter-Werkstatt 273
Bartning, Otto 270
Beck, Pierre 351
Berckheyde, Gerrit 162
Black, Misha 409
Blake, William 90–97
Bor, Paulus 189
Bratby, John 397
Browne, Kenneth 4
Buckley, Alan 268–270
Burra, Edward 51
Burri, Alberto 359
Cadbury-Brown, H. T. 98–100
Cadbury-Brown, H. T., and Ernö Goldfinger 71
Calderon, Jose A., and Walter Weberhofer 351
Cant, James 51
Carter, John 57–58
Casson, Sir Hugh 403–405
Cole, G. R. 171
Conran, Terence 173
Cordell, Magda 359
Crockett, G. A. 171
Cubitt, James and Partners 312–317, 368–371
Cullen, Gordon 281
David, Gerard 161
Devereux and Davies 322
Dittert, Carl 272, 273
Drake and Lasdun 152–160
Dubuffet, Jean 51
Elliott, J. Innes (Chief Architect, Metropolitan Police) 112, 113
Etty, William 296
Fabritius, Carel 163, 164
Farmer and Dark 128–129
Finch, Richard 188
Fisher, Douglas 170, 173
Flaxman, John 285–289
Fleer, F. 272
Forster, E. E. 272
Francesca, Piero della 161
Gardiner, Stephen 2, 405–406
Garroll, Grisdale and Van Alen 12–13
Gate, Bengt 222–236
Gauguin, Paul 397
Gibberd, Frederick 4, 13–15, 333–340
Gibson, Alexander 86–89
Giefer and Mäckler 270, 271
Gillies-Reyburn, D. H. 48
Girard, Alexander 80–86
Goldfinger, Ernö, and H. T. Cadbury-Brown 71
Greaves, Derrick 264
Greenwood and Michell 47
Groenewegen, J. H., and H. Mieras 16
Gundlach-Pederson, O., and Ebbe Andresen 410
Guttoso, Renato 50
Gwilt, George and Son 191–192
Harlow Development Corporation 114
Hattrell, W. S., and Partners 195–199
Hawksmoor, Nicholas 237–239
Henderson, Nigel 356
Henrion, F. H. K., and Peter Miller 126–128
Hicks, Edward 190
Hoffmann, Hans 121
Hogarth, Paul 76–79
Hopp, Bernhard 272
Horta, Victor 388–392
Howgrave-Graham, H. S. (Crawley Development Corporation) 106, 108
Jacobs, Alan B. 246–247
Johnson, Philip, and Mies van der Rohe 1
Kahn and Orr 360
Koolman, Rolf 273
Langmaack, Gerhard 271
Latimer, Clive 407–408
Le Corbusier 145–151, 327–329, 354
Lee, Vernon H. 258
Lewitt-Him 395
Low, Helen, and Humphrey Spender 170
Lubetkin, B. 36–44
Luccichenti and Monaco 382–387
Luckman and Pereira 1
Martin, J. L. (Architect to the London County Council) 323–324
Masson, André 118
Mengoni, Giuseppe 214, 260
Middleditch, Edward 263
Mieras, H., and J. H. Groenewegen 16
Mies van der Rohe, Ludwig, and Philip Johnson 1
Miller, Peter, and F. H. K. Henrion 126–128
Minaux, André 263
Mondriaan, Piet 262
Mooreroft, Roy L. 267–268
Moroni, Federico 119
Moynihan, Rodrigo 51
Müller, Karl 272
Nervi, Pier Luigi 121
Nolan, Sydney 118
Oeschger, A. and H. 9–10
Olsson, Torbjörn 222–236
Paolozzi, Eduardo 359
Pei, I. M., and Associates 351
Pollock, Jackson 359
Post, Herbert 271
Recco, Giuseppe 189
Rosenhauer, Hans 270–272
Russell, R. D. 55-57, 125-126
Saenredam, Pieter 162
Salvatore, Anna 119
Schwarz, Rudolph 271, 272
Schwerdt, Fritz 273

PAGE

Scott, A. F. 395
Sheppard, Richard, and Partners 2, 101–105, 301–303
Silow, Sven 222–236
Skidmore, Owings and Merrill 290–296
Smith, E. T. Ashley (Kent County Architect) 186–187
Smith, Jack 119
Smithson, Alison and Peter 359–360
Soulages, Pierre 119
Spender, Humphrey, and Helen Low 170
Squire, Raglan, and Partners 318–321
Stevenage Development Corporation Architects' Department 45, 46
Sutherland, Graham 189
van den Broek, J. H., and J. B. Bakema 110
van der Gracht, Ides (Regional Director, USFBO) 241–245
van der Heyden, Jan 162–163
van der Poel, Egbert 163
Vermeer, Jan 164
Vinay, Jean 263
Wachsmann, Conrad 121
Wagner, Rudi 270
Ward, Basil 219–221
Wasson Tucker and Parente 351
Watson, A. F. 48
Weberhofer, Walter, and Jose A. Calderon 351
Westwood, Sons, and Harrison 265–267
Wilford, C. Edmund 71

PAGE

Williams, Jack 172
Wogensky, André 142
Womersley, Peter 362–367
Wood, Kenneth 257
Wright, Frank Lloyd 297–300
Yorke, Rosenberg and Mardall 255–256

AUTHORS AND CONTRIBUTORS

Arkwright, John 132–134
Banham, Reyner 54, 193, 194, 355–361
Brett, Lionel 4–16
Browne, Kenneth 304–311
Browne, Kenneth, and Charles Forehoe 106–110
Browne, Kenneth, and Sylvia Crowe 248–254
Casson, Hugh 191, 393–394, 400–401
Clifton-Taylor, Alec 124
Colquhoun, Alan 401
Colvin, Howard 115–117
Coolidge, John 352
Crowe, Sylvia 53–54, 190
Crowe, Sylvia, and Kenneth Browne 248–254
Cullen, Gordon 30–35
de Maré, Eric 119–120
Floud, Peter 331
Forehoe, C. 397
Forehoe, Charles, and Kenneth Browne 106–110
Gardiner, Stephen 167–173
Gloag, John 332

PAGE

Gray, Nicolete 398–400
Harrison, Dex 194
Hinks, Roger 161–164
Jones, Barbara 122
Jordan, R. Furneaux 36–44
Kessels, S. H. 191–192
Laski, Marghanita 165–167
McCallum, Ian 50
Madsen, Stephan Tschudi 388–392
Manson, Grant 297–300
Masson, Georgina 17–20
Melville, Robert 50, 75–79, 118, 189, 262, 325, 396
Moffett, Noel 201–204, 412–416
Nairn, Ian 193, 261–262, 329–330, 394–395
Norgate, John 273–274
Peckover, Emily 264
Pevsner, Nikolaus 117, 259, 270–273
Richards, J. M. 49, 215–218, 222–236, 260
Rowntree, Diana 58–59, 129–131, 199–200
Schmutzler, Robert 90–97
Smith, G. E. Kidder 144, 174–185
Spiller, Brian 372–381
Stirling, James 145–151
Summerson, John 193
Tschudi Madsen, Stephan 388–392
Voelcker, John 60–66, 342–346
Watson, F. J. B. 285–289
Whiffen, Marcus 259, 331, 402
Whistler, Laurence 237–238